MSLWQPLVLVLLVLGCCFAAPRQRQSTLVLFPGDLRTNLTDRQLAEEYLYRYGYTRVAEMRGESKSLGPALLLLQ KQLSLPETGELDSATLKAMRTPRCGVPDLGRFQTFEGDLKWHHHNITYWIQNYSEDLPRAVIDDAFARAFALWSA VTPLTFTRVYSRDADIVIQFGVAEHGDGYPFDGKDGLLAHAFPPGPGIQGDAHFDDDELWSLGKGVVVPTRFGNA DGAACHFPFIFEGRSYSACTTDGRSDGLPWCSTTANYDTDDRFGFCPSERLYTRDGNADGKPCQFPFIFQGQSYS ACTTDGRSDGYRWCATTANYDRDKLFGFCPTRADSTVMGGNSAGELCVFPFTFLGKEYSTCTSEGRGDGRLWCAT TSNFDSDKKWGFCPDQGYSLFLVAAHEFGHALGLDHSSVPEALMYPMYRFTEGPPLHKDDVNGIRHLYGPRPEPE PRPPTTTTPQPTAPPTVCPTGPPTVHPSERPTAGPTGPPSAGPTGPPTAGPSTATTVPLSPVDDACNVNIFDAIA EIGNQLYLFKDGKYWRFSEGRGSRPQGPFLIADKWPALPRKLDSVFEEPLSKKLFFFSGRQVWVYTGASVLGPRR LDKLGLGADVAQVTGALRSGRGKMLLFSGRRLWRFDVKAQMVDPRSASEVDRMFPGVPLDTHDVFQYREKAYFCQ DRFYWRVSSRSELNQVDQVGYVTYDILQCPED

ACTTCCGGTGGGGAGATTCCGGCCTGGAGCTCCCAGGGCCGAGCAGACCTTGGGACCTGTGAGCGCTGCATCCAA TTAACCATGGGAAGGGTCAGCACCAGCCACCAGCCCCTTAGGTGAGGACTCTGCCTGGGGCTCTGCTGATGGTTC CGAATCATGGAGCTGCAGAGAGCTCCTCCAGCCTGGAGACGTTCTTGGTGAAAGCTGTGGTCTAACTCCACCGGC TCTTCCTGCACATTGTATTCAAGAGGGGTGCCTGCCCCCGCTGACTCAGGAGCTCCGGTGCTGCAGCCGCCACGA ATGGGGAGGTGGGCCTCGATGTGGCCTTTTTGTGGAAGGCGGTGTTGACCCTGGGGCTGGTGCTTCTCTACTAC TGCTTCTCCATCGGCATCACCTTCTACAACAAGTGGCTGACAAAGAGCTTCCATTTCCCCCTCTTCATGACGATG CTGCACCTGGCCGTGATCTTCCTCTTCTCCGCCCTGTCCAGGGCGCTGGTTCAGTGCTCCAGCCACAGGGCCCGT GTGGTGCTGAGCTGGGCCGACTACCTCAGAAGAGTGGCTCCCACAGCTCTGGCGACGGCGCTTGACGTGGGCTTG TCCAACTGGAGCTTCCTGTATGTCACCGTCTCGCTGTACACAATGACCAAATCCTCAGCTGTCCTCTTCATCTTG CTCTTCATGTTCACCTACAAGTCCACACAGTTCAACGTGGAGGGCTTCGCCTTGGTGCTGGGGGCCTCGTTCATC GGTGGCATTCGCTGGACCCTCACCCAGATGCTCCTGCAGAAGGCTGAACTCGGCCTCCAGAATCCCATCGACACC ATGTTCCACCTGCAGCCACTCATGTTCCTGGGGCTCTTCCCTCTCTTTGCTGTATTTGAAGGTCTCCATTTGTCC ACATCTGAGAAAATCTTCCGTTTCCAGGACACAGGGCTGCTCCTGCGGGTACTTGGGAGCCTCTTCCTTGGCGGG ATTCTCGCCTTTGGTTTGGGCTTCTCTGAGTTCCTCCTGGTCTCCAGAACCTCCAGCCTCACTCTCCCATTGCC GGCATTTTTAAGGAAGTCTGCACTTTGCTGTTGGCAGCTCATCTGCTGGGCGATCAGATCAGCCTCCTGAACTGG CTGGGCTTCGCCCTCTCGGGAATATCCCTCCACGTTGCCCTCAAAGCCCTGCATTCCAGAGGTGATGGT GGTGACAATGAGGAGGAGGAGTACTTTGTGGCCCAGGGGCAGCAGTGACCAGGCCAGAGATGGCTTAGAAGCA GGCCACTCCCCAGCCTGCTGCCAGCACTCACTGTGCTCAAGCCGCCAGGGCTCATCATGGTAGCTGGGAGCTGTG AAGGGGCGAGCACCAGGCCAGCCTGGGACTGGCCAGAGCTGGGCCCAAGCTGCGCTGGAATCGCAGCAGGAGAGG GGAGTGGGCTGGTTCTTCCCACCACTTCCCAGGCTCTGACAGCCGAGACTCATTTCCAAGGCACAGCAGCTTTCT AAAGGGACTGAGTTTGGACTGGGTTTTTGGACCTCCAGGGGCTGGAGCTTCATCACCTGGGCAGTGTCTTTTCTCA GAGAGCAGGTTTCTTTATAGTTTGGAAATAAATGGTTCACGGTCCACTGGCCGCCTTGTGTTGCTGGAGACGTGG TTAAGCCAGGCCTCCTTCATTTTCTCGCTCCTGTTAGAACACCAGTCCCCTCCCCAGTGGGGCCCCACTGCACCT GCTGGCAGGAAATAAATGAATGTTTACTGAGTACTGCA

CGCGGCAGCCCAGGAGGCGGAGGCAGCGGCAACGGCAGAGACAACGTGCCCGCCGCAGTCAGCCCGGCCTCG TCGGACCCGCACCGCCCGCCCGCCCCGCACCGCGCGCGCCCCTCTCCACTGCGCGCGGTACAAGGAAA TGGTAGAACTAGTGATCTCACCCAGCCTCACTGTAAACAGCGATTGTCTGGATAAACTGAAGTTTAACCGTGCTG ACGCTGCTGTGTGGACTCTGAGTGACAGACAAGGCATCACCAAATCGGCCCCCTGAGAGTGTCCCAGCTCTTCT CCAGATCTTGCCCACGTGTCCTCCCCCGCCAGCCTTCCACAGCCATGGCAGCCTACGGCCAGACGCAGTACAGTG CGGGGATCCAGCAGGCTACCCCCTATACAGCTTACCCACCTCCAGCACAAGCCTATGGAATCCCTTCCTACAGCA TCAAGACAGAAGACAGCTTGAACCATTCCCCTGGCCAGAGTGGATTCCTCAGCTATGGCTCCAGCTTCAGCACCT CACCCACTGGACAGAGCCCATACACCTACCAGATGCACGGCACAACAGGGTTCTATCAAGGAGGAAATGGACTGG AGTATTACGGCTCATCCTACAACCCTCCCTACGTCCCGGCCAGCAGCATCTGCCCTTCGCCCTCTCCACGTCCA CCTACGTCCTCCAGGAGGCATCTCACAACGTCCCCAACCAGAGTTCCGAGTCACTTGCTGGTGAATACAACAC GCCGGTCTAAGAGGAGCAGTGACCCGTCCCCGGCAGGGGACAATGAGATTGAGCGTGTGTTCGTGTGGGACTTGG ATGAGACAATAATTATTTTTCACTCCTTACTCACGGGGACATTTGCATCCAGATACGGGAAGGACACCACGACGT CCGTGCGCATTGGCCTTATGATGGAAGAGATGATCTTCAACCTTGCAGATACACATCTGTTCTTCAATGACCTGG AGGATTGTGACCAGATCCACGTTGATGACGTCTCATCAGATGACAATGGCCAAGATTTAAGCACATACAACTTCT CCGCTGACGGCTTCCACAGTTCGGCCCCAGGAGCCAACCTGTGCCTGGGCTCTGGCGTGCACGGCGGCGTGGACT GGATGAGGAAGCTGGCCTTCCGCTACCGGCGGTGAAGGAGATGTACAATACCTACAAGAACAACGTTGGTGGGT TGATAGGCACTCCCAAAAGGGAGACCTGGCTACAGCTCCGAGCTGAGCTGGAAGCTCTCACAGACCTCTGGCTGA CCCACTCCCTGAAGGCACTAAACCTCATCAACTCCCGGCCCAACTGTGTCAATGTGCTGGTCACCACCACTCAAC TAATTCCTGCCCTGGCCAAAGTCCTGCTATATGGCCTGGGGTCTGTGTTTCCTATTGAGAACATCTACAGTGCAA CCAAGACAGGGAAGGAGACTGCTTCGAGAGGGATAATGCAGAGATTCGGCAGAAAAGCTGTCTACGTGGTGATCG GTGATGGTGTGGAAGAGGAGCAAGGAGCGAAAAAGCACAACATGCCTTTCTGGCGGATATCCTGCCACGCAGACC TGGAGGCACTGAGGCACGCCCTGGAGCTGGAGTATTTATAGCAGGATCAGCAGCATCTCCACCTGCCATCTCACC CTCAGACCCCCTCGCCTTCCCCACCTCCCCACCGAGAACTCCAGAGACCCAGATGTTGGACACCAGGAAGGGGCC CCACAGCCGAGACGACGTGTCCAGTGACCATCTCAGAAGCCGTCCATCAGTCCAAATGGGGGTTCTGAGAAGGAA CTCACAGAACAAAAGCAAGGAATTGCTGATTTGGGGGGTGCCTGGTGATGAGGAGGGGATGGGTTTGTCTTGTCT TCTTTTTAATTTATGGACTAGTCTCATTACTCCGGAATTATGCTCTTGTACCTGTGTGGCTGGGTTTCTTAGTCG TTGGTTTGGTTTTGTTGAACTGGTATGTGGGGTGGTTCACAGTTCTAATGTAAGCACTCTATTCTCCAAGT TGTGCTTTGTGGGGACAATCATTCTTTGAACATTAGAGAGGAAGGCAGTTCAAGCTGTTGAAAAGACTATTGCTT ATTTTTGTTTTTAAAGACCTACTTGACGTCATGTGGACAGTGCACGTGCCTTACGCTACATCTTGTTTTCTAGGA

6273/6881 FIGURE 5795A

CCCACCCGGACCCCCGGGCCCCTGGCGCCGCGCGCCCAGCTCCGGCCCCGGCCCGGGCCCCGGGAGT $\tt CCGAGCGCCAGCTGCGCCTCCGCGTCCTCAACGAGATCTTGGGCACCGAGAGGGACTACGTGGGCACCT$ TGCGCTTCTTGCAGTCGGCATTCCTGCATCGCATCCGGCAGAACGTGGCCGACTCAGTGGAGAAGGGCCTCACGG AGGAGAATGTCAAGGTCCTGTTCTCGAACATCGAAGACATCCTGGAAGTTCATAAGGATTTCTTGGCCGCCTTGG AGTATTGTTTACACCCGGAGCCGCAGTCTCAGCATGAACTTGGGAATGTTTTCTTAAAATTCAAGGACAAGTTCT GCGTGTACGAGGAGTATTGCAGCAACCATGAGAAAGCCCTGAGGCTGCTGGTGGAGCTGAACAAGATCCCTACCG TGCGCGCCTTCCTTTTGAGCTGCATGCTTCTGGGAGGCCGGAAGACCACGGACATCCCTTTGGAAGGCTACCTGT TGTCTCCGATCCAGAGGATCTGCAAGTACCCGCTCCTCCTTAAGGAGCTGGCCAAGAGGACTCCCGGCAAGCACC CAGACCACCCGCGGTCCAGAGTGCCCTGCAGGCCATGAAGACCGTTTGCTCCAACATCAATGAGACCAAGCGGC AGATGGAGAAGCTGGAAGCCCTGGAGCAGCTGCAGTCCCACATCGAAGGCTGGGAGGGTTCCAACCTCACAGACA TCTGCACTCAGCTCCTCCTGCAAGGGACTTTGTTAAAGATCTCTGCGGGCAACATCCAGGAAAGGGCCTTCTTCC TCTTCGACAACCTTCTCGTCTACTGCAAGCGGAAATCCAGGGTCACCGGGAGCAAGAAGTCCACCAAGAGGACCA AATCCATCAACGGCTCCCTCTACATCTTCAGGGGTCGAATCAACACTGAAGTCATGGAGGTGGAGAATGTGGAAG ATGGGACAGCGGATTACCATAGCAACGGCTATACCGTCACCAACGGCTGGAAGATCCACAACACGGCCAAGAATA AGTGGTTTGTCTGCATGGCCAAGACGGCAGAGGAGAAGCAGAAGTGGCTGGATGCCATCATCCGCGAGCGGAGC AGCGCGAGAGCCTGAAGCTGGGCATGGAGCGTGATGCCTACGTCATGATTGCGGAGAAGGGGGGAGAAGCTGTACC ACATGATGATGAACAAGAAGGTGAACCTCATCAAGGACCGCCGGAGAAAGCTGAGCACTGTCCCCAAGTGCTTTC TTGGCAATGAGTTCGTTGCCTGGCTCCTAGAAATTGGTGAAATCAGCAAGACGGAAGAAGGAGTCAACTTGGGCC AAGCCCTGTTGGAGAATGGCATCATCCACCATGTTTCCGACAAGCACCAGTTCAAGAATGAGCAGGTGATGTATC GCTTCCGCTACGACGATGGCACCTACAAGGCCCGAAGTGAGCTGGAGGACATCATGTCCAAGGGTGTGAGGCTTT ACTGCCGTCTTCACAGCCTCTACACCCCGGTGATCAAAGACCGTGATTACCACCTGAAGACCTACAAGTCAGTGC TTCCCGGGAGCAAGCTGGTGGACTGGCTGCTGGCTCAGGGAGACTGCCAGACTCGGGAGGAGGCAGTGGCCCTCG GCGTGGGTCTGTGCAACAATGGCTTCATGCACCACGTGCTGGAGAAGAGCGAGTTCAGGGATGAGTCCCAGTACT TGGAGAACATTCTGGCCAAGCGCCTGCTGATCCTGCCCCAGGAGGAGGACTATGGCTTTGACATCGAGGAGAAGA TCTACTCCATCAATGAGGACCTGGTGTTCCTGCGGCCGTTTTCAGAGGTGGAGTCCATCCTCAACCAGTCCTTCT GCTCCCGCCGCCTCTGCGCCTCCTGGTGGCCACGAAGGCCAAAGAGATCATCAAAATCCCCGACCAGCCGGACA CACTGTGCTTCCAGATTCGTGGAGCTGCCCCACCGTACGTCTATGCTGTGGGGAGAGGCTCTGAGGCCATGGCTG CAGGGCTCTGTGCTGGTCAGTGCATTCTGAAGGTCAATGGCAGCAACGTGATGAACGATGGTGCCCCTGAGGTCC TGGAGCACTTCCAGGCATTCCGGAGTCGGCGCAAGAGGCCCTGGGCCTGTACCAGTGGATCTACCACACCCATG AGGATGCCCAGGAAGCACGAGCCAGTCAGGAGGCCTCCACTGAGGACCCCAGTGGCCGAGCAGGCCCAGGAGGAAG ACCAGGCTGATTCAGCCTTCCCACTGCTGTCCCTGGGTCCCCGGCTGAGCCTGTGTGAGGACAGCCCCATGGTCA CCCTGACTGTGGACAACGTGCACCTGGAACACGGCGTGGTGTATGAGTATGTGAGCACGGCAGGCGTCAGGTGCC ATGTGCTGGAGAAGATCGTGGAGCCCCGCGGCTGCTTCGGCCTCACCGCCAAGATCCTCGAGGCCTTTGCTGCCA ATGACAGCGTCTTCGTGGAGAACTGCAGGCGGCTCATGGCCCTGAGCAGCGCCATCGTGACCATGCCCCACTTTG AGTTCCGCAACATCTGTGACACCAAGCTGGAGAGCATTGGCCAGAGGATTGCCTGCTACCAGGAGTTTGCAGCCC AACTGAAGAGCAGGGTCAGCCCACCCTTCAAACAAGCCCCCCTGGAGCCCCACCCGCTGTGTGGCCTGGACTTCT GCCCCACCATTGCCACATCAACCTCATGGAAGTGTCCTACCCCAAGACCACCCCTCAGTGGGCAGGTCCTTCA GCATCCGCTTTGGACGCAAACCCTCCCTCATCGGCCTTGACCCGGAGCAAGGCCACCTGAACCCCATGTCGTACA CCCAGCACTGCATCACCACCATGGCTGCTCCTCTGGAAGTGCTTGCCTGCTGCAGAGGGTGATCCCCAAGGCC AGGGTCTCCATGATGGCAGCTTCGGGCCAGCCAGTGGGACCCTTGGTCAGGAAGACCGGGGCCTCAGCTTCCTAC TCAAGCAGGAGGACCGTGAGATCCAGGATGCCTACCTGCAGCTCTTCACCAAGCTGGATGTGGCCCTGAAGGAGA CATCCTTGGCTGAGGAGGCCTCCTCCCTGCCCCTGGTCAGTGAAGAGAGCGAGATGGACAGGAGTGACCATGGGG GCATCAAGAAGGTGTGCTTCAAGGTGGCCGAGGAGGACCAGGAGGACTCAGGCCACGACACCATGAGTTATCGCG ACTCCTACAGCGAGTGTAACAGCAATCGAGACTCGGTCCTGTCCTACACCAGCGTGAGAAGTAACAGCTCCTACT

6274/6881 FIGURE 5795B

TGGGCAGCGACGAGATGGGGTCTGGAGATGAGCTGCCCTGTGACATGCGGATCCCATCTGACAAGCAGGACAAGC TTCATGGCTGCCTGGAGCACCTCTTTAACCAGGTGGACTCCATCAATGCTCTCCTCAAGGGGCCAGTCATGAGCC TCCGTGGCCGGAGCCTGATCCAGATTAGCATCCAGGAGGACCCCTGGAACCTCCCAACTCCATCAAGACCCTGG TGGACAACATTCAGAGATATGTGGAAGATGGGAAGAACCAGCTGCTCCTGGCCTTGCTGAAGTGCACAGACACGG AGCTGCAGCTGCGCAGAGACGCGATCTTCTGCCAGGCCCTGGTGGCCGCGTGTGCACCTTCTCCAAGCAGCTGC TGGCGGCCCTGGGCTACCACCAACAACAATGGCGAGTACGAGGAGAGCAGCCGCGACGCCAAGCGGC GGACCATGCTGGAGGACATCTGGGTGACGCTGTCAGAGCTGGACAATGTCACCTTCTCCTTTAAGCAGCTGGACG AGAACTATGTGGCCAACACCAACGTCTTCTACCACATTGAGGGCAGCCGGCAGGCGCTGAAGGTCATCTTCTACC TCACGAAAGTGCTGGAGAACGTGGAGGGGCTGCCTTCTCCAGGCAGCCAGGCCGGAGGATTTGCAGCAGGACA TCAACGCGCAGTCCCTGGAGAAAGTTCAGCAGTATTACCGCAAACTCAGGGCATTTTACCTGGAGCGGTCTAACC TGCCCACGGATGCCACCACGGCGGTAAAGATAGACCAGCTGATCCGCCCCATCAATGCCCTGGATGAGCTCT ${\tt GCCGCCTCATGAAGTCCTTTGTCCACCCAAAGCCTGGTGCTGCTGGGAGTGTGGGCGCCGGCCTCATCCCCATCT}$ CCTCGGAGCTCTGCTACCGCCTGGGGGCCCTGCCAGATGGTCATGTGTGGCACAGGCATGCAGAGGAGCACCCTGA ${\tt GCGTGTCCCTGGAGCAGGCGGCCATCTTGGCACGGAGCCACGGGTTGCTGCCCAAGTGCATCATGCAGGCCACGG}$ ACATCATGCGGAAGCAGGGCCCAAGGGTGGAGATTCTGGCCAAAAACCTGCGAGTCAAGGACCAGATGCCCCAGG GTGCTCCGCGCCTCTACCGCCTCTGCCAGCCGCCGGTGGATGGGGACCTCTGAACACCCAAATGCCCCACGCTGG GCCGCGCCTCTGGAGCTGGGATTTGGGAGGACACAGCAGCAGCGCTGGCCACCCTCGCTGTGATGACGAGCTG GCTGATTGGCCCTGGGCCGGCCCATTCTTCACACGCCTGCCAGAAGCTGGAGGGGTGCTGGAGACCCATAGAGCT GATGGGAGCAGCTGGTGCCTGGCCTTCGGCTCCTGCGTCCCCAGAACCCAAGGGAACGTCATGGAGGCCACATGG GGCCACCCGGCTCCCTCGGGATGGCTCCGCCTGCACTTTTGAAACCCCGGTTTCCTTCAACGTCCACATTCCAGG TGACCACACGTGTCTCCTCCTCATCTTAGCTTCCAGGTTCACCCTAACCCTGTACTAACCTGCTTGGTGGAC TTGGAAAAGACTTGGCTCTGTCGGGAAAGGAGAGACGGGGCCTCCATCACGCCTGTTACCAGAGGATCCCCGAGA GCCACACCAGCTCTGGACATCACCGCCCCTGGAACTGGGGCCACCAGCCCTGGGCACGAGATTTGCTCTGACTTT $\tt CCCACCCTCCATTCTCCAGCGGTTGGCCGGTGTTAGAACTCGCTCTCTTTGAGTGACTGGCTACAAGGGCCTGAG$ AGGTGGCCAGGCTTGGAGCTGGAGGGGATGGAGCCCCACCTGAGGTGCCGTGTCACACGGGTTAGAGGGTC ${\tt ACTGGGAAACACCGGGCGGTGGCTTCTGTGATTTATTTTCTTGATGGTAACTTCTCAGAGCAGGGCGATTGGGAC}$ CAGGTGGTGAGTTCAGGTGGGGGCTCCCTGCTGCCCCCAGGCCTGGGAGCTTGAAGCCCTCCCGGCATCTGGCAT CTGTATCTTGCATCAGAGACAAAGGAGGACCCGCTTTAGCCCTGCTGCGGGAAATGGGGGAGGGCCCAGGGCCAG $\tt CGCATTGTGCACTGGTTTACTTTAAAATGTACAGATTCTTCTCGTTAAATTCTTGATAGATTTTTTATTATTATT$ AAAAGTCAGTTTATAATAC

6275/6881 FIGURE **5796A**

GCATTCCTGGCCCCGCCCCTGCAGCGGGCCGCTCGCTCATGCGCTCTGGCCTCAGGCTCGCTGTCGCGCCATTT TGCCGGGGTTTGAATGTGAGGCGGAGCGGCAGGAGCGGGTAGTGCCAGCTACGGTCCGCGGCTGGGGTTCCC TCCTCCGTTTCTGTATCCCCACGAGATCCTATAGCAATGGAACTCAGCGATGCAAATCTGCAAACACTAACAGAA TATTTAAAGAAAACACTTGATCCTGATCCTGCCATCCGACGTCCAGCTGAGAAATTTCTTGAATCTGTTGAAGGA AATCAGAATTATCCACTGTTGCTTTTGACATTACTGGAGAAGTCCCAGGATAATGTTATCAAAGTATGTGCTTCA CGAGTGGCCATTAAAGCCAACATAGTGCACTTGATGCTTAGCAGCCCAGAGCAAATTCAGAAGCAGTTAAGTGAT GCAATTAGCATTATTGGCAGAGAAGATTTTCCACAGAAATGGCCTGACTTGCTGACAGAAATGGTGAATCGCTTT TTTAAGTCAAACGAGTTATGGACTGAAATTAAGCTTGTTCTGGATGCCTTTGCCTTTGCCTTTGACTAATCTTTTT AAGGCCACTATTGAACTCTGCAGTACCCATGCAAATGATGCCTCTGCCCTGAGGATTCTGTTTTCTTCCCTGATC CTGATCTCAAAATTGTTCTATAGTTTAAACTTTCAGGATCTCCCTGAATTTTTTGAAGATAATATGGAAACTTGG ATGAATAATTTTCATACTCTCTTAACATTGGATAATAAGCTTTTACAAACTGATGATGAAGAGGAAGCCGGCTTA TTGGAGCTCTTAAAATCCCAGATTTGTGATAATGCCGCACTCTATGCACAAAAGTACGATGAAGAATTCCAGCGA TACCTGCCTCGTTTTGTTACAGCCATCTGGAATTTACTAGTTACAACGGGTCAAGAGGTTAAATATGATTTGTTG GTAAGTAATGCAATTCAATTTCTGGCTTCAGTTTGTGAGAGACCTCATTATAAGAATCTATTTGAGGACCAGAAC ACGCTGACAAGTATCTGTGAAAAGGTTATTGTGCCTAACATGGAATTTAGAGCTGCTGATGAAGAAGCATTTGAA GATAATTCTGAGGAGTACATAAGGAGAGATTTGGAAGGATCTGATATTGATACTAGACGCAGGGCTGCTTGTGAT CTGGTACGAGGATTATGCAAGTTTTTTGAGGGACCTGTGACAGGAATCTTCTCTGGTTATGTTAATTCCATGCTG CAGGAATACGCAAAAAATCCATCTGTCAACTGGAAACACAAAGATGCAGCCATCTACCTAGTGACATCTTTGGCA TCAAAAGCCCAAACACAGAAGCATGGAATTACACAAGCAAATGAACTTGTAAACCTAACTGAGTTCTTTGTGAAT ATGATTTTTAGAAATCAAGTGCCAAAAGAACATCTTTTAGTCTCGATTCCTCTTTGATTAATCATCTTCAAGCT GAAAGTATTGTTGTTCATACTTACGCAGCTCATGCTCTTGAACGGCTCTTTACTATGCGAGGGCCTAACAATGCC ACTCTCTTTACAGCTGCAGAAATCGCACCGTTTGTTGAGATTCTGCTAACAAACCTTTTCAAAGCTCTCACACTT CCTGGCTCTTCAGAAAATGAATATATTATGAAAGCTATCATGAGAAGTTTTTCTCTCCTACAAGAAGCCATAATC CCCTACATCCCTACTCATCACTCAGCTTACACAGAAGCTATTAGCTGTTAGTAAGAACCCAAGCAAACCTCAC TTTAATCACTACATGTTTGAAGCAATATGTTTATCCATAAGAATAACTTGCAAAGCTAACCCTGCTGCTGTTGTA AATTTTGAGGAGGCTTTGTTTTTGGTGTTTACTGAAATCTTACAAAATGATGTGCAAGAATTTATTCCATACGTC TTTCAAGTGATGTCTTTGCTTCTGGAAACACACAAAAATGACATCCCGTCTTCCTATATGGCCTTATTTCCTCAT CTCCTTCAGCCAGTGCTTTGGGAAAGAACAGGAAATATTCCTGCTCTAGTGAGGCTTCTTCAAGCATTCTTAGAA CGCGGTTCAAACACAATAGCAAGTGCTGCAGCTGACAAAATTCCTGGGTTACTAGGTGTCTTTCAGAAGCTGATT GCATCCAAAGCAAATGACCACCAAGGTTTTTATCTTCTAAACAGTATAATAGAGCACATGCCTCCTGAATCAGTT GACCAATATAGGAAACAAATCTTCATTCTGCTATTCCAGAGACTTCAGAATTCCAAAACAACCAAGTTTATCAAG **AGTTTTTTAGTCTTTATTAATTTGTATTGCATAAAATATGGGGCACTAGCACTACAAGAAATATTTGATGGTATA** CAACCAAAAATGTTTGGAATGGTTTTGGAAAAAATTATTATTCCTGAAATTCAGAAGGTATCTGGAAATGTAGAG **AAAAAGATCTGTGCGGTTGGCATAACCAAATTACTAACAGAATGTCCCCCAATGATGACACTGAGTATACCAAA** CTGTGGACTCCATTATTACAGTCTTTGATTGGTCTTTTTGAGTTACCCGAAGATGATACCATTCCTGATGAGGAA CATTTTATTGACATAGAAGATACACCAGGATATCAGACTGCCTTCTCACAGTTGGCATTTGCTGGGAAAAAAAGAG CATGATCCTGTAGGTCAAATGGTGAATAACCCCAAAATTCACCTGGCACAGTCACTTCACAAGTTGTCTACCGCC TGTCCAGGAAGGGTTCCATCAATGGTGAGCACCAGCCTGAATGCAGAAGCGCTCCAGTATCTCCAAGGGTACCTT CAGGCAGCCAGTGTGACACTGCTT<u>TAA</u>ACTGCATTTTTCTAATGGGCTAAACCCAGATGGTTTCCTAGGAAATCA CAGGCTTCTGAGCACAGCTGCATTAAAACAAAGGAAGTTCTCCTTTTGAACTTGTCACGAATTCCATCTTGTAAA CTTCTAGTTTGCAACTTCAAGGGACAAGTATTAATAGTTCAGTGTATGGCGTTGGTTTGTGTTGAGCGTTTGCAC GGTTTGGATAATCTTAAATTTTGACGGACACTGTGGAGACTTTCTGTTACTAAATCCTTTTGTTTTGAAGCTGTT AGAATTACTTGTGTTACTTGCCAAGCAGTGCACATTTCATAGTTTCAAATCTGTAATCAGCAATAAAAATCCTAA 6276/6881 FIGURE 5796B

AATATGTACCT

MELSDANLQTLTEYLKKTLDPDPAIRRPAEKFLESVEGNQNYPLLLTLLEKSQDNVIKVCASVTFKNYIKRNWR
IVEDEPNKICEADRVAIKANIVHLMLSSPEQIQKQLSDAISIIGREDFPQKWPDLLTEMVNRFQSGDFHVINGVL
RTAHSLFKRYRHEFKSNELWTEIKLVLDAFALPLTNLFKATIELCSTHANDASALRILFSSLILISKLFYSLNFQ
DLPEFFEDNMETWMNNFHTLLTLDNKLLQTDDEEEAGLLELLKSQICDNAALYAQKYDEEFQRYLPRFVTAIWNL
LVTTGQEVKYDLLVSNAIQFLASVCERPHYKNLFEDQNTLTSICEKVIVPNMEFRAADEEAFEDNSEEYIRRDLE
GSDIDTRRRAACDLVRGLCKFFEGPVTGIFSGYVNSMLQEYAKNPSVNWKHKDAAIYLVTSLASKAQTQKHGITQ
ANELVNLTEFFVNHILPDLKSANVNEFPVLKADGIKYIMIFRNQVPKEHLLVSIPLLINHLQAESIVVHTYAAHA
LERLFTMRGPNNATLFTAAEIAPFVEILLTNLFKALTLPGSSENEYIMKAIMRSFSLLQEAIIPYIPTLITQLTQ
KLLAVSKNPSKPHFNHYMFEAICLSIRITCKANPAAVVNFEEALFLVFTEILQNDVQEFIPYVFQVMSLLLETHK
NDIPSSYMALFPHLLQPVLWERTGNIPALVRLLQAFLERGSNTIASAAADKIPGLLGVFQKLIASKANDHQGFYL
LNSIIEHMPPESVDQYRKQIFILLFQRLQNSKTTKFIKSFLVFINLYCIKYGALALQEIFDGIQPKMFGMVLEKI
IIPEIQKVSGNVEKKICAVGITKLLTECPPMMDTEYTKLWTPLLQSLIGLFELPEDDTIPDEEHFIDIEDTPGYQ
TAFSQLAFAGKKEHDPVGQMVNNPKIHLAQSLHKLSTACPGRVPSMVSTSLNAEALQYLQGYLQAASVTLL

AAGTGACGCATGGTACTTGCGCAAAGACGACGAGGAGGCTGCGAAAAGTTAAGGGCCGGACCGCAGGCTGTGCTC GCTTCCGGAAGTGGCTTCTGCGACAACATGCTTGCGGACCTCGGCTTAATCGGAACCATAGGCGAGGATGACGAG GTGCCGGTGGAGCCCGAGTCTGACTCCGGGGACGAGGAGGAGGGGGGCCCATTGTGCTGGGCAGACGACAAAAA GCTTTGGGGAAGAACCGCAGTGCTGATTTCAACCCTGATTTCGTTTTCACTGAGAAGGAGGGGACGTACGATGGC AGCTGGGCCCTGGCTGATGTCATGAGCCAACTCAAGAAGAAGAGGGCAGCCACTACATTAGATGAGAAGATTGAG GAAGGCTCTGAACCAAAGGAGCAGGAAGACCTTCAAGAGAATGATGAGGCAAGGCTCAGAAGATGAAGCCTCGGAG ACTGACTACTCATCAGCTGATGAGAACATCCTCACCAAAGCAGATACACTCAAAGTAAAGGATCGGAAGAAGAAG AAGAAGAAAGGACAGGAAGCAGGAGGATTTTTTGAAGATGCATCTCAGTACGATGAAAACCTCTCGTTCCAGGAC ATGAACCTTTCCCGCCCTCTTCTGAAGGCCATTACAGCCATGGGCTTCAAGCAGCCCACCCCGATCCAGAAGGCG TGCATACCTGTGGGTCTATTGGGGAAGGACATCTGTGCCTGTGCAGCCACTGGGACAGGTAAAACTGCCGCCTTT GCCCTGCCTGTTTTGGAGCGTCTGATTTATAAACCCCGCCAGGCTCCAGTCACCCGCGTGCTGGTGCTAGTGCCC GCTGACAGGATGCTGGATGAGTACTTTGAGGAGCAGATGAAGGAGATCATCCGAATGTTCCCCACCACCGCCAG ACCATGCTCTTCTCGGCCACCATGACAGACGAGGTGAAAGATCTGGCTTCTGTCTCCTTGAAGAATCCTGTCCGG ATATTTGTGAACAGCAACACAGATGTGGCTCCCTTCCTGCGGCAGGAGTTCATCCGGATCCGGCCTAATCGTGAA GGAGACCGGGAAGCCATCGTGGCAGCTTTGTTGACGAGGACCTTCACTGACCATGTGATGCTGTTCACGCAAACC TCACAGACGCAGCGGCTGGAGGCCCTCCGGCGTTTTAAGGATGAACAGATTGACATCCTCGTGGCCACTGATGTG GCAGCCCGTGGACTTGACATTGAGGGGGTCAAAACGGTAATCAACTTCACAATGCCTAATACCATCAAACATTAT GTCCACCGGGTGGGGCGAACAGCACGTGCTGGCAGGGCTGGGCGCTCAGTCTCTCTGGTGGGAGAAGATGAGCGG AAGATGCTGAAGGAGATTGTAAAAGCTGCCAAGGCCCCTGTGAAGGCCAGGATACTTCCCCAAGATGTCATCCTC AAATTCCGGGACAAGATTGAGAAAATGGAGAAAGATGTGTATGCAGTTCTGCAGCTAGAGGCGGAGGAAAAAGAG ATGCAGCAGTCAGAAGCCCAGATCAATACAGCAAAGCGGCTCCTGGAGAAGGGGAAGGAGGCAGTGGTCCAAGAG CCCGAGAGGAGCTGGTTCCAGACCAAAGAAGAGGAGAAGAAGAGGAGAAAATTGCCAAAGCTCTGCAGGAATTTGAC GAAAGGTCTCAGTTTGAAATCCTCAAGGCGCAGATGTTTGCTGAACGGCTAGCGAAGAGGAATCGCAGAGCCAAG CGGGCCCGAGCAATGCCCGAGGAGGAGCCAGTGAGAGGTCCTGCCAAGAAGCAAAAGCAGGGGAAGAAATCTGTA AAACAGTTGGGCTTGCCCCACCAGAGACGAGGAGGAAACTTTAAATCTAAATCCAGATACAAGAGGAGGAAG<u>TAG</u>

MVLAQRRRGGCEKLRAGPQAVLASGSGFCDNMLADLGLIGTIGEDDEVPVEPESDSGDEEEEGPIVLGRRQKALG KNRSADFNPDFVFTEKEGTYDGSWALADVMSQLKKKRAATTLDEKIEKVRKKRKTEDKEAKSGKLEKEKEAKEGS EPKEQEDLQENDEEGSEDEASETDYSSADENILTKADTLKVKDRKKKKKKGQEAGGFFEDASQYDENLSFQDMNL SRPLLKAITAMGFKQPTPIQKACIPVGLLGKDICACAATGTGKTAAFALPVLERLIYKPRQAPVTRVLVLVPTRE LGIQVHSVTRQLAQFCNITTCLAVGGLDVKSQEAALRAAPDILIATPGRLIDHLHNCPSFHLSSIEVLILDEADR MLDEYFEEQMKEIIRMCSHHRQTMLFSATMTDEVKDLASVSLKNPVRIFVNSNTDVAPFLRQEFIRIRPNREGDR EAIVAALLTRTFTDHVMLFTQTKKQAHRMHILLGLMGLQVGELHGNLSQTQRLEALRRFKDEQIDILVATDVAAR GLDIEGVKTVINFTMPNTIKHYVHRVGRTARAGRAGRSVSLVGEDERKMLKEIVKAAKAPVKARILPQDVILKFR DKIEKMEKDVYAVLQLEAEEKEMQQSEAQINTAKRLLEKGKEAVVQEPERSWFQTKEERKKEKIAKALQEFDLAL RGKKKRKKFMKDAKKKGEMTAEERSQFEILKAQMFAERLAKRNRRAKRARAMPEEEPVRGPAKKQKQGKKSVFDE ELTNTSKKALKQYRASPSFEERKQLGLPHQRRGGNFKSKSRYKRK

 ${\tt GAAA} {\color{red}{\bf TG}} {\color{blue}{\bf ATCTCCAAAAGATTTCTCAGCAAGGCAGATTTACTTCTGCAGAATGGTGCTGCTTGCACTCCTGGTCA}$ CAGTGAGAGCACCCCGAACAAAGGAGGTGAAGTGGTTTTTATCCCTAACACAGCTAGTTCCTGCTTCTGTGTTCT ATCCCCATTGGCTAGAGTCCAATCTAAACTAGTCCTGATTGGCTATTTTAAACAGGAGGGGTGTGGGTTACAGCA GTGGGAAGAGCAGTTGCCACGAGCGAGGGAGACTTTTCCAGATAAGGAACAAATGCGGGTTACAGGTTGGGATTG GTGGGAGAAATGTTTACAGAATGGG<u>TAA</u>TTAGGAGTGGGAAGGTATGAGGAAGTTGACCTTAAGAACAAAGAACA AGGAAGTTAAACTTTGAAGAGAAACCCATCATACCTAACAGTCTTGTAAGAAAGGATGACAAAGTGATTGAACAT TGGGTGGAGCTAATTTTCCTTGGCCAATTCACTTAGTAAGATAAGGAGCTCCAAATCATATTTAAGTTGGGAGTC **AATTGATTTTACTTAATTCTTGTGAGGTTCAGTTATAAGATTCATCATACTACTACCATGAGCCATCCTCAGCTC** CTTGTTACATGGGCCTGTTAACATGGCAGCTTTGTCTATAAGCAAACCCAGGAGAGAAAGACATAGCAGAGATGG ATGTTTGAAGTCTATACCTTCCACCCCCTTTAAAGAGAAAGTAACACCACTCCTTTTCTGTGTCCCTTGGGGACA CTACCTCCATGTCTGGTCACATGGCTGGACTTTACAGCAGATAAGCATACTGTGGCCTGAGACCATGATTGTATG CTTTCCTTCTGCTGACCTTTACAATCCCTCAATAAATTGAGCTAACACAGGGAAGCTTTTTTACCAAATAACTGT GTTGCATCATCCTCCAGTTTGCCTGGTGTCCTTAATCAATGGAAGGGGAATAAGCAAACTGAGTTTTCTTACACC CCTCAAAAATTGTAGTTCATGTCAGTCAGTGATGACTCATCTTAGAAGTATTTTGTTTTTGGATGTGAATGTG CATAGTTCTTAAAGTCCAACATTCATGTAATAAGACATCTTGCATATAACAATGACCCTTACGTCTAAGATGTTA AATAGATCCTAAGCCTGGTATAACTTTATTCAAGTATCCTTATTTGCCCCTAAAATGTCTTTAATACACATTACT TGGGTTATTTCTTGAATGAACATACAGGTATCCCAATTTCTGTTTTTAAGAGAATGGGGTCTTGCTCTGTCACCC AGGCTGGAGTGCAGTGCAGTCATGGCTTACTGCATCCATGATCCTCCTGCCTCAGCCTCCCAAGTAGATGGG ACTGAAAGCACACTGCCATCCCTGGCTAATGTTTTCATATTTTGTAGAGTTGCAGCCTTGCTACGTGACCCAG GCTGGAGTGTAGTAGCTATTCACAGGCATGATTGCTTGAAACTCATGGCTTCAAGGGAAACTCCCACCCTCAATA TCCTCAGTAGCTGCAACTACAGCCATACCCCCCACTGCTCAGCTTCTCATCCTTTAAAAGATTTTTACTGGTAGT GTCCTCATTCTGGGTTTTTGTCTTCTGTGTTTACTGTGACATGAAGTCATTTTTAGATGAAGGTTAAACATTTTG CCAACGCAGGTACAATATGGGATTCAATAAAAGTACAGAATTAAAGTTGTCTTATTAGAGATTGGGAAGTTTCCC AGCTCCGTTTATCGGTACTTGGCCGTACCGATAAAGGGGATGGACTTGGAGTGACCAGGTCTTAGTCACATGTAT GGCGATGGAATATGAGAGGGGCCCTCTGGAAAGAAAAGGACAGACCCTGTGCTTTCATGAAAGTGAAGATCTGGC TGAACCAGTTCCACAAGGTTACTGTATACATAGCCTGAGTTTAAAAGGCTGTGCCCACTTCAAGAATGTCATTGT TAGACTTTGAAATTTCTAACTGCCTACCTGCATAAAGAAAATAAAATCTTTTAAATC

 $\verb|MISKRFLSKADLLLQNGAACTPGHSESTPNKGGEVVFIPNTASSCFCVLSPLARVQSKLVLIGYFKQEGCGLQQW|\\ EEQLPRARETFPDKEQMRVTGWDWWEKCLQNG|\\$

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GGCACGGCCTAGCGAGTGGTTCTTCTGCGCTACTGCTGCGCGAATCGGCGACCCCAGTGCCTCGACCACTATGCC GCGCTCTTTCCTCGTCAGGAAGCCCTCCGACCCCAATCGGAAGCCTAACTACAGCGAGCTGCAGGACTCTAATCC AGAGTTTACCTTCCAGCAGCCCTACGACCAGGCCCACCTGCTGGCAGCCATCCCACCTCCGGAGATCCTCAACCC CACCGCCTCGCTGCCAATGCTCATCTGGGACTCTGTCCTGGCGCCCCAAGCCCAACTCACTTGCCTGGGCCTCCCT TCGGCTCCAGGAGAGTCCCAGGGTGGCAGAGCTGACCTCCCTGTCAGATGAGGACAGTGGGAAAGGCTCCCAGCC CCCCAGCCCACCCTCACCGGCTCCTTCGTCCTTCTCCTCTACTTCAGTCTCTTCCTTGGAGGCCGAGGCCTATGC TGCCTTCCCAGGCTTGGGCCAAGTGCCCAAGCAGCTGGCCCAGCTCTCTGAGGCCCAAGGATCTCCAGGCTCGAAA GGCCTTCAACTGCAAATACTGCAACAAGGAATACCTCAGCCTGGGTGCCCTCAAGATGCACATCCGAAGCCACAC GCTGCCCTGCGTCTGCGGAACCTGCGGGAAGGCCTTCTCTAGGCCCTGGCTGCTACAAGGCCATGTCCGGACCCA CACTGGCGAGAAGCCCTTCTCCTGTCCCCACTGCAGCCGTGCCTTCGCTGACCGCTCCAACCTGCGGGCCCACCT CCAGACCCACTCAGATGTCAAGAAGTACCAGTGCCAGGCGTGTGCTCGGACCTTCTCCCGAATGTCCCTGCTCCA $\tt CAAGCACCAAGAGTCCGGCTGCTCAGGATGTCCCCGC\underline{TGA}CCCTCGAGGCTCCCTCTTCCTCTCCATACCTGCCC$ $\verb|CTGCCTGACAGCCTTCCCCAGCTCCAGCAGGAAGGACCCCACATCCTTCTCACTGCCATGGAATTCCCTCCTGAG|\\$ GCTGGCCTGTCTGCGTGGGTTTTTGTATCCAGAGCTGTTTGGATACAGCTGCTTTGAGCTACAGGACAAAGGCTG ACAGACTCACTGGGAAGCTCCCACCCCACTCAGGGGACCCCACTCCCCTCACACACCCCCCCACAAGGAACCC TCAGGCCACCCTCCACGAGGTGTGACTAACTATGCAATAATCCACCCCCAGGTGCAGCCCCAGGGCCTGCGGAGG $\tt CGGTGGCAGACTAGAGTCTGAGATGCCCCGAGCCCAGGCAGCTATTTCAGCCTCCTGTTTGGTGGGGTGGCACCT$ GTTTCCCGGGCAATTTAACAATGTCTGAAAAGGGACTGTGAGTAATGGCTGTCACTTGTCGGGGGCCCCAAGTGGG GTGCTCTGGTCTGACCGATGTGTCTCCCAGAACTATTCTGGGGGCCCGACAGGTGGGCCTGGGAGGAAGATGTTT ACATTTTTAAAGGTACACTGGTATTTATATTTCAAACATTTTGTATCAAGGAAACGTTTTGTATAGTTATATGTA

 $\label{thm:constraint} $$\operatorname{MPRSFLVRKPSDPNRKPNYSELQDSNPEFTFQQPYDQAHLLAAIPPPEILNPTASLPMLIWDSVLAPQAQPIAWA$$$\operatorname{SLRLQESPRVAELTSLSDEDSGKGSQPPSPPSPAPSSFSSTSVSSLEAEAYAAFPGLGQVPKQLAQLSEAKDLQA$$$\operatorname{RKAFNCKYCNKEYLSLGALKMHIRSHTLPCVCGTCGKAFSRPWLLQGHVRTHTGEKPFSCPHCSRAFADRSNLRA$$\operatorname{HLQTHSDVKKYQCQACARTFSRMSLLHKHQESGCSGCPR}$$

TTCACACGGCACGACTTCATCGAGACCAACGGGGACAACTGCCTGGTGACACTGCTGCCGCTGCTAAACATCGCC TACAAGTTCCGCACCCACAGCCCTGAAGCCCTGGAGCAGCTATACCCCTGGGAGTGCTTCGTCTTCTGCCTGATC ATCTTCGGCACCTTCACCAACCAGATCCACAAGTGGTCGCACCGTACTTTGGGCTGCCACGCTGGGTCACCCTC CTGCAGGACTGGCATGTCATCCTGCCACGTAAACACCATCGCATCCACCACGTCTCACCCCACGAGACCTACTTC TGCATCACCACAGGAGTAAAAGTCCCTCGCAATTTCCGACTGTTGGAAGAACTCGAAGAAGGCCAGAAAGGAGTA GGAGATGGCACAGTTAGCTGGGGTCTAGAAGATGACGAAGACATGACACTTACAAGATGGACAGGGATGATAATT GGGCCTCCAAGAACAATTTATGAAAACCGAATATACAGCCTTAAAATAGAATGTGGACCTAAATACCCAGAAGCA CCCCCTTTGTAAGATTTGTAACAAAAATTAATATGAATGGAGTAAATAGTTCTAATGGAGTGGTGGACCCAAGA GCCATATCAGTGCTAGCAAAATGGCAGAATTCATATAGCATCAAAGTTGTCCTGCAAGAGCTTCGGCGCCTAATG ATGTCTAAAGAAAATATGAAACTCCCTCAGCCGCCCGAAGGACAGTGTTACAGCAAT**TAA**TCAAAAAGAAAAACC ACAGGCCCTTCCCCTTCCCCCAATTCGATTTAATCAGTCTTCATTTTCCACAGTAGTAAATTTTCTAGATACGT CTTGTAGACCTCAAAGTACCGGAAAGGAAGCTCCCATTCAAAGGAAATTTATCTTAAGATACTGTAAATGATACT AATTTTTTGTCCATTTGAAATATAAGTTGTGCTATAACAAATCATCCTGTCAAGTGTAACCACTGTCCACGTA GTTGAACTTCTGGGATCAAGAAAGTCTATTTAAATTGATTCCCATCATAACTGGTGGGGCACATCTAACTCAACT GTGAAAAGACACATCACAATCACCTTGCTGCTGATTACACGGCCTGGGGTCTCTGCCTTCTCCCTTTTACCCTC CCGCCTCCCACCTCCTGCAACACACCCTCTAGCCTGGGGGGGCTTGTTAGAGTAGATGTGAAGGTTTCAGGT $\tt CGCAGCCTGTGGGACTACTGCTAGGTGTGTGGGGTGTTTCGCCTGCACCCCTGGTTCCTTTAAGTCTTAAGTGAT$ GCCCCTTCCAAACCATCATCCTGTCCCCACGCTCCTCCACTCCCGCCCTTGGCCGAAGCATAGATTGTAACCCCT CCACTCCCTCTGAGATTGGCTTCGGTGAGGAATTCAGGGCTTTCCCCATATCTTCTCCCCCCACCTTTATCG AGGGGTGCTGCTTTTTCTCCCTCCTCCTCAAGTTCCTTTTTGCACCGTCACCACCCAACACCTTCCATGACACTT CCTTGCTTTGGCCAGAAGCCATCAGGTAAGGTTGGAAAGAGCCTCTGACCTCCCTTGTTTAGTTTTGGAACCATA CTCACTCACCTCCACCAGCCTGGGAAATGAATATTGGGTCCTCAGCCTGCCACCCTCTGCTGTCATCAGCTGA TGCATTGTTTTTAGCTCAGGTTTTGATAAGGTGAAAAGAATAGTCACCAGGGTTACTCAGACCTGCCAGCTCTCG GAGTCCTTGGTGGTGAACTTGGAGAAAGACCGCATGAAGATACTTGTAAGCACACATGATCCCTCTGAATTGTT TTACTTTCCTGTAACTGCTTTTGCTTTTAAAAATTGAAGAAGTTTTAAACAGGGCTTTCATTTGGTCATCCTTGC AATCCATTGGGGTCTAGTTTGGAATCTGACAACTGGAACAAAAAGAACCTTGAATCCGGTGCATGCCTTGGTTTT GGTGCTGCTGCTCCCAAGATCCTCAGCAGGGATTAAGAAGGAACCCGGTGTGCACAGCAGATCCCCGAAAT TGGTGGGCTTGACCTCCTGGCAAATTGCTGCGTCTTTCCACTTGCTGTTCAGGACCACTAAATGCTGAAATGTGG ACCACCTTTTGAAGCAGCAACTATCAAGTCTGAAAAGCAATTGATGTTTCCATTAATCTTTTTCTGGGGGGAAAA CCTTAGTTCTAAGGATTTAACATCCTGTAAGTGAAGTTTAACATAACAGTATTCCATAAGCAGCCTTTTTATTGT

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AAATTTCACTGCAAAGACAATTTATGAAAACCGAATATACAGCCTTAAAATAGAATGTGGACCTAAATACCCAGA AGCACCCCCTTTGTAAGATTTGTAACAAAAATTAATATGAATGGAGTAAATAGTTCTAATGGAGTGGTGGACCC AAGAGCCATATCAGTGCTAGCAAAATGGCAGAATTCATATAGCATCAAAGTTGTCCTGCAAGAGCTTCGGCGCCT AATGATGTCTAAAGAAAATATGAAACTCCCTCAGCCGCCCGAAGGACAGTGTTACAGCAATTAATCAAAAAGAAA AACCACAGGCCCTTCCCCCCAATTCGATTTAATCAGTCTTCATTTTCCACAGTAGTAAATTTTCTAGAT ACGTCTTGTAGACCTCAAAGTACCGGAAAGGAAGCTCCCATTCAAAGGAAATTTATCTTAAGATACTGTAAATGA TACTAATTTTTTGTCCATTTGAAATATATAAGTTGTGCTATAACAAATCATCCTGTCAAGTGTAACCACTGTCCA CGTAGTTGAACTCTGGGATCAAGAAAGTCTATTTAAATTGATTCCCATCATAACTGGTGGGGCACATCTAACTC AACTGTGAAAAGACACATCACAATCACCTTGCTGCTGATTACACGGCCTGGGGTCTCTGCCTTCTCCCCTTAC CCTCCCGCCTCCCACCCTCCCTGCAACAACAGCCCTCTAGCCTGGGGGGCTTGTTAGAGTAGATGTGAAGGCTTC AGGTCGCAGCCTGTGGGACTACTGCTAGGTGTGGGGGTGTTTCGCCTGCACCCCTGGTTTCTTTAAGTCTTAAG TGATGCCCCTTCCAAACCATCATCCTGTCCCCACGCTCCTCCACTCCCGCCCTTGGCCGAAGCATAGATTGTAAC CCCTCCACTCCCCTCTGAGATTGGCCTTCGGTGAGGAATTCAGGGCTTTCCCCCATATCTTCTCTCCCCCACCTTT ATCGAGGGGTGCTGCTTTTTCTCCCTCCTCCTCAAGTTCCTTTTTGCACCGTCACCACCCCAACACCTTCCATGAC ACTTCCTTGCTTTGGCCAGAAGCCATCAGGTAAGGTTGGAAAGAGCCTCTGACCTCCCTTGTTTAGTTTTGGAAC CATACTCACTCACCCACCAGCCTGGGAAATGAATATTGGGTCCTCAGCCCTGCCACCCTCTGCTGTCATCAG CTGATGCATTGTTTTTAGCTCAGGTTTTGATAAGGTGAAAAGAATAGTCACCAGGGTTACTCAGACCTGCCAGCT CTCGGAGTCCTTGGTGGTTGAACTTGGAGAAAGACCGCATGAAGATACTTGTAAGCACACATGATCCCTCTGAAT TGTTTTACTTTCCTGTAACTGCTTTTGCTTTTAAAAATTGAAGAAGTTTTAAACAGGGCTTTCATTTGGTCATCC TTGCAATCCATTGGGGGTCTAGTTTGGAATCTGACAACTGGAACAAAAAGAACCTTGAACCCGGTGCATGCCTTG GTTTTGGTGCTGCTGCTTCCCAAGATCCTCAGCAGGGATTAAGAAGGAACCCGGTGTGCACAGCAGATCCCC GAAATTGGTGGGCTTGACCTCCTGGCAAATTGCTGCGTCTTTCCACTTGCTGTTCAGGACCACTAAATGCTGAAA GTAAAACCACCTTTTGAAGCAGCAACTATCAAGTCTGAAAAGCAATTGATGTTTCCATTAATCTTTTTCTGGGGG GAAAACCTTAGTTCTAAGGATTTAACATCCTGTAAGTGAAGTTTAACATAACAGTATTCCATAAGCAGCCTTTTT

 ${\tt MKEDLNLENFTAKTIYENRIYSLKIECGPKYPEAPPFVRFVTKINMNGVNSSNGVVDPRAISVLAKWQNSYSIKV} \\ {\tt VLQELRRLMMSKENMKLPQPPEGQCYSN}$

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6290/6881 FIGURE 5810

MEMEKEFEQIDKSGSWAAIYQDIRHEASDFPCRVAKLPKNKNRNRYRDVSPFDHSRIKLHQEDNDYINASLIKME EAQRSYILTQGPLPNTCGHFWEMVWEQKSRGVVMLNRVMEKGSLKCAQYWPQKEEKEMIFEDTNLKLTLISEDIK SYYTVRQLELENLTTQETREILHFHYTTWPDFGVPESPASFLNFLFKVRESGSLSPEHGPVVVHCSAGIGRSGTF CLADTCLLLMDKRKDPSSVDIKKVLLEMRKFRMGLIQTADQLRFSYLAVIEGAKFIMGDSSVQDQWKELSHEDLE PPPEHIPPPPRPPKRILEPHNGKCREFFPNHQWVKEETQEDKDCPIKEEKGSPLNAAPYGIESMSQDTEVRSRVV GGSLRGAQAASPAKGEPSLPEKDEDHALSYWKPFLVNMCVATVLTAGAYLCYRFLFNSNT

MASLEVSRSPRRSRELEVRSPRQNKYSVLLPTYNERENLPLIVWLLVKSFSESGINYEIIIIDDGSPDGTRDVA EQLEKIYGSDRILLRPREKKLGLGTAYIHGMKHATGNYIIIMDADLSHHPKFIPEFIRKQKEGNFDIVSGTRYKG NGGVYGWDLKRKIISRGANFLTQILLRPGASDLTGSFRLYRKEVLEKLIEKCVSKGYVFQMEMIVRARQLNYTIG EVPISFVDRVYGESKLGGNEIVSFLKGLLTLFATT

GGAAGACTTGGGTCCTTGGGTCGCAGGTGGGAGCCGACGGTGGGTAGACCGTGGGGGATATCTCAGTGGCGGAC GAGGACGGCGGGGACAAGGGGCGCTGGTCGGAGTGGCGGAGCGTCAAGTCCCCTGTCGGTTCCTCCGTCCCTGA GTGTCCTTGGCGCTGCCTTGTGCCCGCCCAGCGCCTTTGCATCCGCTCCTGGGCACCGAGGCGCCCTGTAGGATA CTGCTTGTTACTTATTACAGCTAGAGGGTCTCACTCCATTGCCCAGGCCAGAGTGCGGGGATATTTGATAAGAAA CTTCAGTGAAGGCCGGGCGCGGTGGCTCATGCCCGTAATCCCAGCATTTTCGGAGGCCGAGGCATCATGGACCGA TCTAAAGAAAACTGCATTTCAGGACCTGTTAAGGCTACAGCTCCAGTTGGAGGTCCAAAACGTGTTCTCGTGACT CAGCAATTTCCTTGTCAGAATCCATTACCTGTAAATAGTGGCCAGGCTCAGCGGGTCTTGTGTCCTTCAAATTCT TCCCAGCGCATTCCTTTGCAAGCACAAAAGCTTGTCTCCAGTCACAAGCCGGTTCAGAATCAGAAGCAGAAGCAA GCTTTGGAAGACTTTGAAATTGGTCGCCCTCTGGGTAAAGGAAAGTTTGGTAATGTTTATTTGGCAAGAGAAAAG CAAAGCAAGTTTATTCTGGCTCTTAAAGTGTTATTTAAAGCTCAGCTGGAGAAAGCCGGAGTGGAGCATCAGCTC AGAAGAGAAGTAGAAATACAGTCCCACCTTCGGCATCCTAATATTCTTAGACTGTATGGTTATTTCCATGATGCT ${\tt ACCAGAGTCTACCTAATTCTGGAATATGCACCACTTGGAACAGTTTATAGAGAACTTCAGAAACTTTCAAAGTTT}$ GATGAGCAGAGAACTGCTACTTATATAACAGAATTGGCAAATGCCCTGTCTTACTGTCATTCGAAGAGAGTTATT ${\tt CATAGAGACATTAAGCCAGAGAACTTACTTCTTGGATCAGCTGGAGAGCTTAAAATTGCAGATTTTGGGTGGTCA}$ GTACATGCTCCATCTTCCAGGAGGACCACTCTCTGTGGCACCCTGGACTACCTGCCCCCTGAAATGATTGAAGGT CGGATGCATGATGAGAAGGTGGATCTCTGGAGCCTTGGAGTTCTTTGCTATGAATTTTTAGTTGGGAAGCCTCCT TTTGAGGCAAACACATACCAAGAGACCTACAAAAGAATATCACGGGTTGAATTCACATTCCCTGACTTTGTAACA GAACACCCCTGGATCACAGCAAATTCATCAAAACCATCAAATTGCCAAAACAAAGAATCAGCTAGCAAACAGTCT TAGGAATCGTGCAGGGGGAGAAATCCTTGAGCCAGGGCTGCCATATAACCTGACAGGAACATGCTACTGAAGTTT ATTTTACCATTGACTGCCGCCCTCAATCTAGAACGCTACACAAGAAATATTTGTTTTACTCAGCAGGTGTGCCTT AACCTCCCTATTCAGAAAGCTCCACATCAATAAACATGACACTCTGAAGTGAAAGTAGCCACGAGAATTGTGCTA CTTATACTGGTTCATAATCTGGAGGCAAGGTTCGACTGCAGCCGCCCCGTCAGCCTGTGCTAGGCATGGTGTCTT CACAGGAGGCAAATCCAGAGCCTGGCTGTGGGGAAAGTGACCACTCTGCCCTGACCCCGATCAGTTAAGGAGCTG TGCAATAACCTTCCTAGTACCTGAGTGAGTGTGTAACTTATTGGGTTGGCGAAGCCTGGTAAAGCTGTTGGAATG AGTATGTGATTCTTTTTAAGTATGAAAATAAAGATATATGTACAGACTTGTATTTTTTCTCTGGTGGCATTCCTT TAGGAATGCTGTGTGTCTGTCCGGCACCCCGGTAGGCCTGATTGGGTTTCTAGTCCTCCTTAACCACTTATCTCC CATATGAGAGTGTGAAAAATAGGAACACGTGCTCTACCTCCATTTAGGGATTTGCTTGGGATACAGAAGAGGCCA TGTGTCTCAGAGCTGTTAAGGGCTTATTTTTTTAAAACATTGGAGTCATAGCATGTGTGTAAACTTTAAATATGC AAATAAATAAGTATCTATGTCT

AGAGGAGTGGGACCGATCGATAGCGCAGCGGTCGCTTGGCGCCCTTTCAGCGTGCGCAGTGAACGTGCGCTCGGA GCGGTAGATTGGGCAGGATTCGCGCCTCCATTTTTCCAGGAGAGAGCGGGATACCAAGAGAACCGGACCAGCTGC TGGCAGGGAAACTGTCTTCCTTTTCTCCAAG<u>ATG</u>TACAGAACCAAAGTGGGCTTGAAGGACCGCCAGCAGCTCTA ${\tt CAAGCTGATCATTAGCCAGCTGCTATATGACGGCTACATCAGCATCGCCAATGGCCTCATCAATGAAATCAAGCC}$ TCAGTCTGTGTGTGCACCCTCGGAGCAGCTCCTGCATCTCATCAAACTCGGAATGGAAAACGATGACACCGCAGT TCAGTATGCAATTGGTCGTTCAGATACTGTTGCCCCTGGCACAGGGATTTGACCTGGAATTTGATGCAGATGTTCA GACTATGTCCCCAGAGGCTTCTGAGTACGAAACATGCTATGTCACATAAAGGACCATGCCGTGTAGCTAC $\verb|CTATAGTAGAGATGGACAGTTAATAGCTACTGGGTCTGCTGATGCTTCGATAAAGATACTTGACACAGAGAGGAT|\\$ GATTCGAACTCTTTATGACCATGTGGATGAAGTCACGTGCCTTGCTTTCCACCCAACAGAACAGATCCTGGCTTC TGGTTCAAGGGATTATACTCTTAAATTATTTGATTATTCCAAACCATCAGCAAAAAGAGCCTTCAAATACATTCA GGAAGCTGAAATGTTACGTTCCATCTCTTTTCATCCTTCTGGAGACTTTATACTTGTCGGAACTCAGCATCCTAC TCTTCGCCTTTATGATATCAACACCTTTCAATGTTTTGTCTCTTGCAATCCTCAAGATCAACACACCGATGCTAT ATGTTCCGTTAATTACAATTCTAGTGCCAATATGTACGTAACTGGAAGCAAGGACGGCTGCATCAAATTATGGGA ${\tt TGGTGTTTCAAATCGATGCATCACAACTTTTGAGAAAGCACATGACGGTGCTGAAGTTTGTTCTGCCATTTTTTC}$ CAAAAATTCTAAATACATTCTCTCAAGTGGAAAAGACTCTGTAGCTAAACTTTGGGAAATATCAACGGGACGAAC ACTGGTCAGATACACGGGCGCGGGTTTAAGTGGACGCCAGGTGCACCGGACACAGGCTGTGTTTAACCACACCGA GGACTATGTGTTGCTGCCCGACGAGAGGACGATCAGTCTTTGCTGCTGGGACTCGAGGACAGCCGAGCGGAGAAA $\tt CCTGCTGTCGTTGGGGCACAACAATATTGTACGCTGCATAGTGCACTCCCCCACCAACCCCGGGTTCATGACGTG$ CAGCGATGACTTCAGAGCGCGGTTTTGGTACCGGAGATCGACCACTGAC TGA GCCACCCTCTCCGTAGGGTTCTTTCTCGAGGACTCTACCCTCCCCCACGTCCTGTCTCAGCTGCAGTCGTAAGTCCGTGCACCATCCTTGACGTT TTGCTGCCACCTCTGTCCACATTCTTCTTGGATTTGTATAAAAGAATCTTTTTTTACCTTGATGTAGAATCATGG TGGAAAAAGTTGGAAACACAGATCTGTGCAGTTCTACATTCACTGATTATTACAGTGTGATTTTCATCGGTTTTG

MYRTKVGLKDRQQLYKLIISQLLYDGYISIANGLINEIKPQSVCAPSEQLLHLIKLGMENDDTAVQYAIGRSDTV APGTGIDLEFDADVQTMSPEASEYETCYVTSHKGPCRVATYSRDGQLIATGSADASIKILDTERMLAKSAMPIEV MMNETAQQNMENHPVIRTLYDHVDEVTCLAFHPTEQILASGSRDYTLKLFDYSKPSAKRAFKYIQEAEMLRSISF HPSGDFILVGTQHPTLRLYDINTFQCFVSCNPQDQHTDAICSVNYNSSANMYVTGSKDGCIKLWDGVSNRCITTF EKAHDGAEVCSAIFSKNSKYILSSGKDSVAKLWEISTGRTLVRYTGAGLSGRQVHRTQAVFNHTEDYVLLPDERT ISLCCWDSRTAERRNLLSLGHNNIVRCIVHSPTNPGFMTCSDDFRARFWYRRSTTD

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TGCGACGGGGGAACAATCCCCAAGAGGCATGAACTGGTGAAGGGGCCGAAGAAGGTTGAGAAGGTCGACAAAGAT GCTGAATTAGTGGCCCAATGGAACTATTGTACTCTAAGTCAGGAAATATTAAGACGACCAATAGTTGCCTGTGAA AAAGGAAACACTAAAGGTGACAAGCACGATGACCTCCAGCGGGCGCGTTTCATCTGCCCCGTTGTGGGCCTGGAG AAAGCGGAAGTTTGCCACACGTGTGGGGCTGCCTTCCAGGAGGATGATGTCATCATGCTCAATGGCACCAAGGAG GATGTGGACGTGCTGAAGACAAGGATGGAGGAGAGAAGGCTGAGAGCTGGAAAAGAAAACAAAGAAACCCC AAGGCAGCAGAGTCTGTTTCAAAACCAGATGTCAGTGAAGAAGCCCCAGGGCCATCAAAAGTTAAGACAGGGAAG ${\tt TCTTCTGGAAAAGCTGGGAAGCCTCCGTGTGGAGCCACAAAGAGGTCCATCGCTGACAGTGAAGAATCGGAGGCC}$ TACAAGTCCCTCTTTACCACTCACAGCTCCGCCAAGCGCTCCAAGGAGGAGTCTGCCCACTGGGTCACCCACACG $\verb|TCCTACTGCTTC| \textbf{TGA} \\ | AGCCCGCACTGCCACCGCTCCTGCCCCAGAAGGTTGTTTAGTTTCCACGTAGGCAGGTCG| \\ | AGCCCGCACTGCCACGCTCCTGCCCCAGAAGGTTGTTTAGTTTCCACGTAGGCAGGTCG| \\ | AGCCCGCACTGCCACCGCTCCTGCCCCAGAAGGTTGTTTAGTTTCCACGTAGGCAGGTCG| \\ | AGCCCACAGAAGGTTGTTTAGTTTCCACGTAGGCAGGTCG| \\ | AGCCCACAGAAGGTTGTTTAGTTTCCACGTAGGCAGGTCG| \\ | AGCCCACAGAAGGTTGTTTAGTTTCCACGTAGGCAGGTCG| \\ | AGCCCACAGAAGGTTGTTAGTTTCCACGTAGGCAGGTCG| \\ | AGCCCACAGAAGGTTGTTAGTTAGTTTCCACGTAGGCAGAGGTTGTTAGGTCAGAGAGGTTGTTAGG$ CTTTGTGCCTCTGAGTGCGCTGCTGTGTTCTCTCTATAGTTCTGTGTCATAAAGCTGTCCTGGCCAGCCTTCA ${\tt AGCTGGTGTGGCCACTCTTGATGTGAGGCGTGTCGGTTCCAGGGGGGGACATGGGAGGGGCTGCACAGTGGCCCGA}$ GGTCATGCTTGCTTCCACCTGCAGGTGCATTTGGTCCTTTCCATGGCCAGGAAGCCCTGTGGGCTGCACTTTTTA TGCCCACTAGAAGCTTCGAAGGGCCTCGTCCCTCTGCTACAGCCCTGGGAGGAGCCAGGATCCTTGTTGGTCTAG CTAAATACTGTTAGGGGAGTGTGCCCCATCTCATCATTTCGAAGATAGCAGAGTCATAGTTGGGCACCCAGTGAT TGGGTTCAAAAATAAAGCTGGTCTGCCTCTTC

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MGCDGGTIPKRHELVKGPKKVEKVDKDAELVAQWNYCTLSQEILRRPIVACELGRLYNKDAVIEFLLDKSAEKAL GKAASHIKSIKNVTELKLSDNPAWEGDKGNTKGDKHDDLQRARFICPVVGLEMNGRHRFCFLRCCGCVFSERALK EIKAEVCHTCGAAFQEDDVIMLNGTKEDVDVLKTRMEERRLRAKLEKKTKKPKAAESVSKPDVSEEAPGPSKVKT GKPEEASLDSREKKTNLAPKSTAMNESSSGKAGKPPCGATKRSIADSEESEAYKSLFTTHSSAKRSKEESAHWVT HTSYCF

CCGAGGCGGCCTCTTGTGCGATCCAGGGCGCACAAGGCTGGGAGAGCGCCCCGGGGCCCCTGCTATCCGCGCCGG $\tt CGCCCGCCTCCTCACTCGCCTTTTCGTTCGCCGGGGCTGCTTTCCAAGCCCTGCGGTGCGCCCGGGCGAGTGCGG$ ACCTGGGGCGGTGCGGGCCCGGAGCCCGGGTAGCGCGTAGAGCCGGCGCGATGCACGTGCGCTCACTG CGAGCTGCGGCGCCCCACAGCTTCGTGGCGCTCTGGGCACCCCTGTTCCTGCTGCGCCCCCGGCCCGACTTC AGCCTGGACAACGAGGTGCACTCGAGCTTCATCCACCGGCGCCTCCGCAGCCAGGAGCGGCGGGAGATGCAGCGC GAGATCCTCTCCATTTTGGGCTTGCCCCACCGCCCCGCGCCCCGCACCTCCAGGGCAAGCACAACTCGGCACCCATG TTCATGCTGGACCTGTACAACGCCATGGCGGTGGAGGAGGGCGGCGGGCCCGGCGGCCAGGGCTTCTCCTACCCC TACAAGGCCGTCTTCAGTACCCAGGGCCCCCCTCTGGCCAGCCTGCAAGATAGCCATTTCCTCACCGACGCCGAC CGGTTTGATCTTTCCAAGATCCCAGAAGGGGAAGCTGTCACGGCAGCCGAATTCCGGATCTACAAGGACTACATC CGGGAACGCTTCGACAATGAGACGTTCCGGATCAGCGTTTATCAGGTGCTCCAGGAGCACTTGGGCAGGGAATCG AGCAACCACTGGGTGGTCAATCCGCGGCACAACCTGGGCCTGCAGCTCTCGGTGGAGACGCTGGATGGGCAGAGC ATCAACCCCAAGTTGGCGGGCCTGATTGGGCGGCACGGGCCCCAGAACAAGCAGCCCTTCATGGTGGCTTTCTTC AAGGCCACGGAGGTCCACTTCCGCAGCATCCGGTCCACGGGGAGCAAACAGCGCAGCCAGAACCGCTCCAAGACG AAGCACGAGCTGTATGTCAGCTTCCGAGACCTGGGCTGGCAGGACTGGATCATCGCGCCTGAAGGCTACGCCGCC CTGGTCCACTTCATCAACCCGGAAACGGTGCCCAAGCCCTGCTGTGCGCCCACGCAGCTCAATGCCATCTCCGTC CTCTACTTCGATGACAGCTCCAACGTCATCCTGAAGAAATACAGAAACATGGTGGTCCGGGCCTGTGGCTGCCAC TAGCTCCTCCGAGAATTCAGACCCTTTGGGGCCAAGTTTTTCTGGATCCTCCATTGCTCGCCTTGGCCAGGAACC AGCAGACCAACTGCCTTTTGTGAGACCTTCCCCTCCCTATCCCCAACTTTAAAGGTGTGAGAGTATTAGGAAACA TGAGCAGCATATGGCTTTTGATCAGTTTTTCAGTGGCAGCATCCAATGAACAAGATCCTACAAGCTGTGCAGGCA AAACCTAGCAGGAAAAAAAAAACGCATAAAGAAAAATGGCCGGGCCAGGTCATTGGCTGGGAAGTCTCAGCCA GGCAAGGGGTGGGCACATTGGTGTCTGTGCGAAAGGAAAATTGACCCGGAAGTTCCTGTAATAAATGTCACAATA AAACGAATGAATG

 $\label{thm:mapkrpp} $$ MGKGDPKKPRGKMSSYAFFVQTCREEHKKKHSDASVNFSEFSNKCHYERQMKTYIPPKGETKKKFKDPNAPKRPP SAFFLFCSEYHPKIKGEHPGLSIGDVAKKLGEMWNNTAADDKQPGEKKAAKLKEKYEKDIAAYQAKGKPEAAKKG VVKAEKSKKKKEEEEDEEDEEDEEDEEDEDDDDE$

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TTTAAAGCTGGGAGGTTCTGCCACCAAGCACGGCCTTCCCACTGGGAACACAAACTTGCTGGCGGGAAGAGCCCG GAAAGAAACCTGTGGATCTCCCTTCGAGATCATCCAAAGAGAAGAAAGGTGACCTCACATTCGTGCCCCTTAGCA GCACTCTGCAGAAATGCCTCCTCAGCTGCAAAACGGCCTGAACCTCTCGGCCAAAGTTGTCCAGGGAAGCCTGGA CAGCCTACCCCAGGCAGTGAGGGAGTTTCTCGAGAATAACGCTGAGCTGTGTCAGCCTGATCACATCCACATCTG TGACGGCTCTGAGGAGAGATGGGCGGCTTCTGGGCCAGATGGAGGAAGAGGGCATCCTCAGGCGGCTGAAGAA GTATGACAACTGCTGGTTGGCTCTCACTGACCCCAGGGATGTGGCCAGGATCGAAAGCAAGACGGTTATCGTCAC TTTTGAGAAAGCGTTCAATGCCAGGTTCCCAGGGTGCATGAAAGGTCGCACCATGTACGTCATCCCATTCAGCAT GGGGCCGCTGGGCTCGCCTCTGTCAAAGATCGGCATCGACGGATTCACCCTACGTGGTGGCCAGCATGCG GATCATGACGCGGATGGGCACGCCCGTCCTGGAAGCAGTGGGGCGATGGGGAGTTTGTCAAATGCCTCCATTCTGT GGGGTGCCCTCTGCCTTTACAAAAGCCTTTGGTCAACAACTGGCCCTGCAACCCGGAGCTGACGCTCATCGCCCA $\verb|CCTGCCTGACCGCAGAGAGATCATCTCCTTTGGCAGTGGGTACGGCGGGAACTCGCTGGCTCGGGAAGAAGTGCTT|\\$ CAACCCTGAGGGTGAGAAGAAGTACCTGGCGGCCGCATTTCCCAGCGCCTGCGGGAAGACCAACCTGGCCATGAT GAACCCCAGCCTCCCGGGTGGAAGGTTGAGTGCGTCGGGGATGACATTGCCTGGATGAAGTTTGACGCACAAGG TCATTTAAGGGCCATCAACCCAGAAAATGGCTTTTTCGGTGTCGCTCCTGGGACTTCAGTGAAGACCAACCCCAA TGCCATCAAGACCATCCAGAAGAACACAATCTTTACCAATGTGGCCGAGACCAGCGACGGGGGGGTTTACTGGGA AGGCATTGATGAGCCGCTAGCTTCAGGTGTCACCATCACGTCCTGGAAGAATAAGGAGTGGAGCTCAGAGGATGG GTCTCCGGAAGGTGTTCCCATTGAAGGCATTATCTTTGGAGGCCGTAGACCTGCTGGTGTCCCTCTAGTCTATGA AGCTCTCAGCTGGCAACATGGAGTCTTTGTGGGGGCCGCCATGAGATCAGAGGCCACAGCGGCTGCAGAACATAA AGGCAAAATCATCATGCATGACCCCTTTGCCATGCGGCCCTTCTTTGGCTACAACTTCGGCAAATACCTGGCCCA CTGGCTTAGCATGGCCCAGCACCCAGCAGCCAAACTGCCCAAGATCTTCCATGTCAACTGGTTCCGGAAGGACAA GGAAGGCAAATTCCTCTGGCCAGGCTTTGGAGAGAACTCCAGGGTGCTGGAGTGGATGTTCAACCGGATCGATGG AAAAGCCAGCACCAAGCTCACGCCCATAGGCTACATCCCCAAGGAGGATGCCCTGAACCTGAAAGGCCTGGGGCA CATCAACATGATGGAGCTTTTCAGCATCTCCAAGGAATTCTGGGAGAAGGAGGTGGAAGACATCGAGAAGTATCT GAGGGCAAGTGTTCCCAAATTGACGCCACCATAATAATCATCACCACACCGTGAGCAGATCTGAAAGGCACACTT TGATTTTTTTAAGGATAAGAACCACAGAACACTGGGTAGTAGCTAATGAAATTGAGAAGGGAAATCTTAGCATGC CTCCAAAAATTCACATCCAATGCATAGTTTGTTCAAATTTAAGGTTACTCAGGCATTGATCTTTTCAGTGTTTTT ATGTACTGTTATTGAAAATATTTTAATACCTTTGGAAAAATCTTGGGCAAGATGACCTACTAGTTTTCCTTGAA AAAAAGTTGCTTTGTTATTAATATTGTGCTTAAATTATTTTTTATACACCATTGTTCCTTACCTTTACATAATTGC AATATTTCCCCCTTACTACTTCTTGGAAAAAATTACAAAATGAAGTTTTATAGAAAAG

MPPQLQNGLNLSAKVVQGSLDSLPQAVREFLENNAELCQPDHIHICDGSEEENGRLLGQMEEEGILRRLKKYDNC WLALTDPRDVARIESKTVIVTQEQRDTVPIPKTGLSQLGRWMSEEDFEKAFNARFPGCMKGRTMYVIPFSMGPLG SPLSKIGIELTDSPYVVASMRIMTRMGTPVLEAVGDGEFVKCLHSVGCPLPLQKPLVNNWPCNPELTLIAHLPDR REIISFGSGYGGNSLLGKKCFALRMASRLAKEEGWLAEHMLILGITNPEGEKKYLAAAFPSACGKTNLAMMNPSL PGWKVECVGDDIAWMKFDAQGHLRAINPENGFFGVAPGTSVKTNPNAIKTIQKNTIFTNVAETSDGGVYWEGIDE PLASGVTITSWKNKEWSSEDGEPCAHPNSRFCTPASQCPIIDAAWESPEGVPIEGIIFGGRRPAGVPLVYEALSW QHGVFVGAAMRSEATAAAEHKGKIIMHDPFAMRPFFGYNFGKYLAHWLSMAQHPAAKLPKIFHVNWFRKDKEGKF LWPGFGENSRVLEWMFNRIDGKASTKLTPIGYIPKEDALNLKGLGHINMMELFSISKEFWEKEVEDIEKYLEDQV NADLPCEIEREILALKQRISQM

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AAGCTAGCGGCAGAGGCTCAGCCCCGGCGGCAGCGCCCCGCTGCCAGCCCATTTTCCGGACGCCACCCGCG GCGCCGCCGCCGCCGTCCATGCACCGCTTGATGGGGGTCAACAGCACCGCCGCCGCCGCCGCCGCCGCCAATG TCTCCTGCACGTGCAACTGCAAACGCTCTTTGTTCCAGAGCATGGAGATCACGGAGCTGGAGTTTGTTCAGATCA TCATCATCGTGGTGGTGATGGTGGTGGTGGTGGTGATCACGTGCCTGCTGAGCCACTACAAGCTGTCTGCAC GGTCCTTCATCAGCCGGCACAGCCAGGGGCGGAGGAGAAGATGCCCTGTCCTCAGAAGGATGCCTGTGGCCCT CCGTGCCGCCCTTCGCCCAGCGGGAGCGCTTCCACCGCTTCCAGCCCACCTATCCGTACCTGCAGCACGAGATCG ACCTGCCACCATCTCGCTGTCAGACGGGGAGGACCCCCACCCTACCAGGGCCCCTGCACCCTCCAGCTTC GGGACCCCGAGCAGCAGCTGGAACTGAACCGGGAGTCGGTGCGCGCACCCCCAAACAGAACCATCTTCGACAGTG ACCTGATGGATAGTGCCAGGCTGGGCGCCCCTGCCCCCCAGCAGTAACTCGGGCATCAGCGCCACGTGCTACG GCAGCGGCGGCGCATGGAGGGGCCGCCGCCCACTACAGCGAGGTCATCGGCCACTACCCGGGGTCCTCCTTCC AGAGCGCAGCCATCTGGAGCAAAGAAGGATAAACAGAAAGGACACCCTCTCTAGGGTCCCCAGGGGGGCCGGG GCAACGCATCGTGTGGCCCTCCCTCCCACCTCCCTGTGTATAAATATTTACATGTGATGTCTGGTCTGAATGCA CTTTTGTTTATGATAATTTCACTTAACTTTAAAGACATATTTGCACAAAACCTTTGTTTAAAGATCTGCAATATT ATATATAAATATATAAGATAAGATAAGAAAACTGTATGTGCGAGGGCAGGAGTATTTTTGTATTAGAAGAGGCCT ATTAAAAAAAAGTTGTTTTCTGAACTAGAAGAGGAAAAAAATGGCAATTTTTGAGTGCCAAGTCAGAAAGTGT GTATTACCTTGTAAAGAAAAAATTACAAAGCAGGGGTTTAGAGTTATTATATAAATGTTGAGATTTTGCACTA TTTTTTAATATATATGTCAGTGCTTGCTTGATGGAAACTTCTCTTGTGTCTGTTGAGACTTTAAGGGAGAAAT GTCGGAATTTCAGAGTCGCCTGACGGCAGAGGGTGAGCCCCCGTGGAGTCTGCAGAGAGGCCTTGGCCAGGAGCG GCGGGCTTTCCCGAGGGGCCACTGTCCCTGCAGAGTGGATGCTTCTGCCTAGTGACAGGTTATCACCACGTTATA TATTCCCTACCGAAGGAGACACCTTTTCCCCCCTGACCCAGAACAGCCTTTAAATCACAAGCAAAATAGGAAAGT TAACCACGGAGGCACCGAGTTCCAGGTAGTGGTTTTGCCTTTCCCAAAAATGAAAATAAACTGTTACCGAAGGAA TTAGTTTTTCCTCTTTTTTTCCAACTGTGAAGGTCCCCGTGGGGTGGAGCATGGTGCCCCTCACAAGCCGCAG CGGCTGGTGCCCGGGCTACCAGGGACATGCCAGAGGGCTCGATGACTTGTCTCTGCAGGGCGCTTTGGTGGTTGT TCAGCTGGCTAAAGGTTCACCGGTGAAGGCAGGTGCGGTAACTGCCGCACTGGACCCTAGGAAGCCCCAGGTATT CGCAATCTGACCTCCTCTGTCTGTTTCCCTTCACGGATCAATTCTCACTTAAGAGGCCAATAAACAACCCAACA TGAAAAGGTGACAAGCCTGGGTTTCTCCCAGGATAGGTGAAAGGGTTAAAATGAGTAAAGCAGTTGAGCAAACAC TCCCTTCTGGTGTGTCTGTTGTTTTTCATTTACATCTCTCTTAGACTCCGCTCTTGTTCTCCAGGTTTT CACCAGATAGATTTGGGGTTGGCGGGACCTGCTGGTGACGTGCAGGTGAAGGACAGGAAGGGGCATGTGAGCGTA AATAGAGGTGACCAGAGGAGAGCATGAGGGGTGGGGCTTTGGGACCCACCGGGGCCAGTGGCTGGAGCTTGACGT GGGAGTGGCTTTCCATTTTGGGCAGAATGCTGACTAGTAGACTAACATAAAAGATATAAAAGGCAATAACTATTG TTTGTGAGCAACTTTTTATAACTTCCAAAACAAAACCTGAGCACAGTTTTGAAGTTCTAGCCACTCGAGCTCA TGCATGTGAAACGTGTGCTTTACGAAGGTGGCAGCTGACAGACGTGGGCTCTGCATGCCGCCAGCCTAGTAGAAA GTTCTCGTTCATTGGCAACAGCAGAACCTGCCTCTCCGTGAAGTCGTCAGCCTAAAATTTGTTTCTCTCTTGAAG AGGATTCTTTGAAAAGGTCCTGCAGAGAAATCAGTACAGGTTATCCCGAAAGGTACAAGGACGCACTTGTAAAGA TGATTAAAACGTATCTTTCCTTTATGTGACGCGTCTCTAGTGCCTTACTGAAGAAGCAGTGACACTCCCGTCGCT CGGTGAGGACGTTCCCGGACAGTGCCTCACTCACCTGGGACTGGTATCCCCTCCCAGGGTCCACCAAGGGCTCCT GCTTTTCAGACACCCCATCATCCTCGCGGGTCCTCACCCTGTCTCTACCAGGGAGGTGCCTAGCTTGGTGAGGTT

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ACTCCTGCTCCTCCAACCTTTTTTTGCCAAGGTTTGTACACGACTCCCATCTAGGCTGAAAACCTAGAAGTGGAC CTTGTGTGTGTGCATGGTGTCAGCCCAAAGCCAGGCTGAGACAGTCCTCATATCCTCTTGAGCCAAACTGTTTGG GTCTCGTTGCTTCATGGTATGGTCTGGGATTTGTGGGAATGGCTTTGCGTGAGAAAGGGGAGAGAGTGGTTGCTG CCCTCAGCCGGCTTGAGGACAGAGCCTGTCCCTCTCATGACAACTCAGTGTTGAAGCCCAGTGTCCTCAGCTTCA TGTCTCTGGAAACGACCAGAGTTAAGCTCTCGGCTTCTCTGCTGAGGGTGCACCCTTTCCTCTAGATGGTAGTTG TCACGTTATCTTTGAAAACTCTTGGACTGCTCCTGAGGAGGCCCTCTTTTCCAGTAGGAAGTTAGATGGGGGTTC TCAGAAGTGGCTGATTGGAAGGGGACAAGCTTCGTTTCAGGGGTCTGCCGTTCCATCCTGGTTCAGAGAAGGCCG GTGTTTTTGCAAAGAATGAAAAGGGACCCCATATGTAGCAAAAATCAGGGCTGGGGGAGAGCCGGGTTCATTCCC GAACCATAAAATATCCCGTCGATAAGGAAAGAAAATGTCGTTGTTGTTGTTTTTCTGGAAACTGCTTGAAATCTT CAATGCTTTCACGTTGGTTCCTGGCGTGGGAACTGCTCTCTTTGCAGCCCCATTTCCCAAGCTCTGTTCAAGTT AAACTTATGTAAGCTTTCCGTGGCATGCGGGGCGCGCACCCACGTCCCCGCTGCGTAAGACTCTGTATTTGGATG CCAATCCACAGGCCTGAAGAAACTGCTTGTTGTGTATCAGTAATCATTAGTGGCAATGATGACATTCTGAAAAGC TGCAATACTTATACAATAAATTTTACAATTCTTTGG

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6305/6881 FIGURE 5824

GCGCGCCCACCCGGTAGAGGACCCCCGCCCGTGCCCCGACCGGTCCCCGCCTTTTTGTAAAACTTAAAGCGGGCGCAGCATTAACGCTTCCCGCCCCGGTGACCTCTCAGGGGTCTCCCCGCCAAAGGTGCTCCCGCCGCTAAGGAACATG

GCGAAGGTGGAGCAGGTCCTGAGCCTCGAGCCGCAGCACGAGCTCAAATTCCGAGGTCCCTTCACCGATGTTGTC ACCACCAACCTAAAGCTTGGCAACCCGACAGACCGAAATGTGTGTTTTAAGGTGAAGACTACAGCACCACGTAGG TACTGTGTGAGGCCCAACAGCGGAATCATCGATGCAGGGGCCTCAATTAATGTATCTGTGATGTTACAGCCTTTC GATTATGATCCCAATGAGAAAAGTAAACACAAGTTTATGGTTCAGTCTATGTTTGCTCCAACTGACACTTCAGAT ATGGAAGCAGTATGGAAGGCCAAAACCGGAAGACCTTATGGATTCAAAACTTAGATGTGTTTTGAATTGCCA GCAGAGAATGATAAACCACATGATGTAGAAATAAAATTAATATCCACAACTGCATCAAAGACAGAAACACCA ATAGTGTCTAAGTCTCTGAGTTCTTTTTGGATGACACCGAAGTTAAGAAGGTTATGGAAGAATGTAAGAGGCTG CAAGGTGAAGTTCAGAGGCTACGGGAGGAGAACAAGCAGTTCAAGGAAGAAGATGGACTGCGGATGAGGAAGACA CTGGTGGTTTTGTTCTTTATCGTTGGTGTAATTATTGGGAAGATTGCCTTGTAGAGGTAGCATGCACAGGATGGT AAATTGGATTGGTGGATCCACCATATCATGGGATTTAAATTTATCATAACCATGTGTAAAAAGAAATTAATGTAT AATGTAACGATCTTTTAGAAAGTTAAAAATGTATAGTAACTGATTGAGGGGGAAAAGAATGATCTTTATTAATGA CAAGGGAAACCATGAGTAATGCCACAATGGCATATTGTAAATGTCATTTTAAACATTGGTAGGCCTTGGTACATG ATGCTGGATTACCTCTCTAAAATGACACCCTTCCTCGCCTGTTGGTGCTCGCCCTTGGGGAGCTGGAGCCCAGC ATGCTGGGGAGTGCGGTCACCACACAGTAGTCCCCACGTGGCCCACTCCCGGCCCAGGCTGCTTTCCGTGTC TTCAGTTCTGTCCAAGCCATCAGCTCCTTGGGACTGATGAACAGAGTCAGAAGCCCAAAGGAATTGCACTGTGGC TGCTTTGTTCACTTAAAGGGACCAAGCTAAATTTGTATTGGTTCATGTAGTGAAGTCAAACTGTTATTCAGAGAT GTTTAATGCATATTTAACTTATTTAATGTATTTCATCTCATGTTTTCTTATTGTCACAAGAGTACAGTTAATGCT GCGTGCTGCTGAACTCTGTTGGGTGAACTGGTATTGCTGCTGGAGGGGCTGTGGGCTCCTCTGTCTCTGGAGAGTC TGGTCATGTGGAGGTGGGGTTTATTGGGATGCTGGAGAAGAGCTGCCAGGAAGTGTTTTTTCTGGGTCAGTAAAT AACAACTGTCATAGGCAGGGAAATTCTCAGTAGTGACAGTCAACTCTAGGTTACCTTTTTTAATGAAGAGTAGTC AGTCTTCTAGATTGTTCTTATACCACCTCTCAACCATTACTCACACTTCCAGCGCCCAGGTCCAAGTTTGAGCCT GACCTCCCCTTGGGGACCTAGCCTGGAGTCAGGACAAATGGATCGGGCTGCAAAGGGTTAGAAGCGAGGGCACCA GCAGTTGTGGGTGGGGAGCAAGGGAAGAGAGAAACTCTTCAGCGAATCCTTCTAGTACTAGTTGAGAGTTTGACT GTGAATTAATTTTATGCCATAAAAGACCAACCCAGTTCTGTTTGACTATGTAGCATCTTGAAAAGAAAAATTATA ATAAAGCCCCAAAATTAAGA

MAKVEQVLSLEPQHELKFRGPFTDVVTTNLKLGNPTDRNVCFKVKTTAPRRYCVRPNSGIIDAGASINVSVMLQP FDYDPNEKSKHKFMVQSMFAPTDTSDMEAVWKEAKPEDLMDSKLRCVFELPAENDKPHDVEINKIISTTASKTET PIVSKSLSSSLDDTEVKKVMEECKRLQGEVQRLREENKQFKEEDGLRMRKTVQSNSPISALAPTGKEEGLSTRLL ALVVLFFIVGVIIGKIAL

6307/6881 FIGURE 5826

CTCGCCTCAGTCTCCTCTGTCCTCTCCCAGGCAAGAGGACCGGCGGAGGCACCTCTCTCGAGTCTTAGGCTGCGG AATCTAAGACTCAGCGAGAGGAGCCCGGGAGGAGACAGAACTTTCCCCTTTTTTCCCATCCCTTCTTCTTGCTCA ACAAGGAGGTGAGGCTGGGACCTCCGGGCCAGCTTCTCACCTCATAGGGTGTACCTTTCCCGGCTCCAGCAGCCA AGCCACCGCGCTCCTCTGGCTCTCCTGCTCCATCGCGCTCCTCCGCGCCCCTTGCCACCCTCCAACGCCCGTGCCCA GCAGCGCGGGCTGCCCAACAGCGCCGGAGCTTCCTTAACGCCCACCACCGCTCCGGCGCCCAGGTATTCCCTGA CGAGGAAGAGTTCGACTACGAGACCGAGAGCGAGACCGAGTCCGAAATCGAGTCCGAGACCGACTTCGAGACCGA GCCTGAGACCGCCCCACCACTGAGCCCGAGACCGAGCCTGAAGACGATCGCGGCCCGGTGGTGCCCCAAGCACTC CACCTTCGGCCAGTCCCTCACCCAGCGTCTGCACGCTCTCAAGTTGCGAAGCCCCGACGCCTCCCCAAGTCGCGC GCCGCCCAGCACTCAGGAGCCCCAGAGCCCCAGGGAAGGGGAGGAGCTCAAGCCCGAGGACAAAGATCCAAGGGA CCCCGAAGAGTCGAAGGAGCCCAAGGAGGAGAAGCAGCGCGTCGCTGCAAGCCAAAGAAGCCCACCCGCCGTGA CGCGTCCCCGGAGTCCCCTTCCAAAAAGGGACCCATCCCCATCCGGCGTCAC<u>TAA</u>TGGAGGACGCCGTCCAGATT CTCCTTGTTTTCATGGATTCAGGTGCTGGAGAATCTGGTAAAAGCACCATTGTGAAGCAGATGAGGATCCTGCAT GTTAATGGGTTTAATGGAGAGGGCGGCGAAGAGGACCCGCAGGCTGCAAGGAGCAACAGCGATGGCAGTGAGAAG GCAACCAAAGTGCAGGACATCAAAAACAACCTGAAAGAGGCGATTGAAACCATTGTGGCCGCCATGAGCAACCTG GTGCCCCCGTGGAGCTGGCCAACCCCGAGAACCAGTTCAGAGTGGACTACATCCTGAGTGTGATGAACGTGCCT GACTTTGACTTCCCTCCGAATTCTATGAGCATGCCAAGGCTCTGTGGGAGGATGAAGGAGTGCCTGCTAC GAACĢCTCCAACGAGTACCAGCTGATTGACTGTGCCCAGTACTTCCTGGACAAGATCGACGTGATCAAGCAGGCT GACTATGTGCCGAGCGATCAGGACCTGCTTCGCTGCCGTGTCCTGACTTCTGGAATCTTTGAGACCAAGTTCCAG GTGGACAAAGTCAACTTCCACATGTTTGACGTGGGTGGCCAGCGCGATGAACGCCGCAAGTGGATCCAGTGCTTC AACGATGTGACTGCCATCATCTTCGTGGTGGCCAGCAGCAGCTACAACATGGTCATCCGGGAGGACAACCAGACC AACCGCCTGCAGGAGGCTCTGAACCTCTTCAAGAGCATCTGGAACAACAGATGGCTGCGCACCATCTCTGTGATC CTGTTCCTCAACAAGCAAGATCTGCTCGCTGAGAAAGTCCTTGCTGGGAAATCGAAGATTGAGGACTACTTTCCA GAATTTGCTCGCTACACTACTCCTGAGGATGCTACTCCCGAGCCCGGAGAGGACCCACGCGTGACCCGGGCCAAG TACTTCATTCGAGATGAGTTTCTGAGGATCAGCACTGCCAGTGGAGATGGGCGTCACTACTGCTACCCTCATTTC ACCTGCGCTGTGGACACTGAGAACATCCGCCGTGTGTTCAACGACTGCCGTGACATCATTCAGCGCATGCACCTT ACGTAATTGTACAAGCAGTTAATCACCCACCATAGGGCATGATTAACAAAGCAACCTTTCCCTTCCCCCGAGTGA TTTTGCGAAACCCCCTTTCCCTTCAGCTTGCTTAGATGTTCCAAATTTAGAAAGCTTAAGGCGGCCTACAGAAA AGCAAAGAAAAAAAA

MDRRSRAQQWRRARHNYNDLCPPIGRRAATALLWLSCSIALLRALATSNARAQQRAAAQQRRSFLNAHHRSGAQV FPESPESESDHEHEEADLELSLPECLEYEEEFDYETESETESEIESETDFETEPETAPTTEPETEPEDDRGPVVP KHSTFGQSLTQRLHALKLRSPDASPSRAPPSTQEPQSPREGEELKPEDKDPRDPEESKEPKEEKQRRRCKPKKPT RRDASPESPSKKGPIPIRRH

ATC CAGGCCTTGAGGCTTCGGCCAGCACTCATGGAGCCCGGAGCCTTCAGTGGTGCCAGACCAGGCCTGGGAGGA TACAGCCCTCCACCAGAAGAAGCTATGCCCTTTGAGTTTGACCAGCCTGCCCAGAGAGGGCTGCAGTCAACTTCTC TTACAGGTCCCAGACCTTGCTCCAGGAGGCCCAGGTGCTGCAGGGGTCCCCGGAGCTCCTCCCGAGGAGCCCCAA ${\tt GCCCTCAGGCCTGCAAAGGCTGGCTCCAGAGGAGGCTACAGCCCTCCCCCTGAGGAGACTATGCCATTTGAGCTT}$ GATGGAGAGGATTTGGGGACGACAGCCCACCCCCGGGGCTTTCCCGAGTTATCGCACAAGTCGACGGCAGCAGC CAGTTCGCGGCAGTCGCGCCTCGAGTGCGGTCCGCCTCACTCCCGCCGCGAACGCGCCTCCCCTCTGGGTCCCA ATCTCCGGACCCCCGTTCGAGATTGGCAGCGCCCCCGCTGGGGTCGACACTCCCGTCAACATGGACAGCCCC GTTGAGGAGGAAGCAGCAGAGATGGAAGGAGCCGCTGATGCCGCGGAGGGAAAAAGTACCCTCTCCGGGGTAC GGATCCCCTGCCGCGGGGCAGCCTCAGCGGATACCGCTGCCAGGCCAGCCCTGCAGCCCCAGCCGATCCTGAC TCCGGGGCAACCCCAGAAGATCCCGACTCCGGGACAGCACCAGCCGATCCTGACTCCGGGGCATTCGCAGCCGAT CCCGACTCCGGGGCAGCCCTGCCGCCCCAGCCGATCCCGACTCCGGGGCGCCCCTGACGCCCCAGCCGATCCC GACTCCGGGGCGCCCTGACGCCCAGCCGATCCAGATGCCGGGGCGGCCCCTGAGGCTCCCGCCCCTGCG GCTGCTGAGACCCGGGCAGCCCATGTCGCCCCAGCTGCGCCAGACGCAGGGGCTCCCACTGCCCCAGCCGCTTCT GCCACCCGGGCAGCCCAAGTCCGCCGGGCGGCCTCTGCAGCCCCTGCCTCCGGGGCCAGACGCAAGATCCATCTC AGACCCCCAGCCCCGAGATCCAGGCTGCCGATCCGCCTACTCCGCGGCCTACTCGCGTCTGCCTGGCGGGGC AAGTCCGAGAGCAGCCGCGCGCGCGCGTGTACTACGATGAAGGGGTGGCCAGCAGCGACGATGACTCCAGCGGA GACGAGTCCGACGATGGGACCTCCGGATGCCTCCGCTGGTTTCAGCATCGGCGAAATCGCCGCCGAAAGCCC GGCTACATGTGTACGCACCGCCTGCTGCTTCTAGGTGCTGGAGAATCTGGTAAAAGCACCATTGTGAAGCAGATG AGGATCCTGCATGTTAATGGGTTTAATGGAGAGGGCGGCGAAGAGGACCCGCAGGCTGCAAGGAGCAACAGCGAT GGTGAGAAGGCAACCAAAGTGCAGGACATCAAAAACAACCTGAAAGAGGCGATTGAAACCATTGTGGCCGCCATG AGCAACCTGGTGCCCCCGTGGAGCTGGCCAACCCCGAGAACCAGTTCAGAGTGGACTACATCCTGAGTGTGATG AACGTGCCTGACTTTGACTTCCCTCCCGAATTCTATGAGCATGCCAAGGCTCTGTGGGAGGATGAAGGAGTGCGT GCCTGCTACGAACGCTCCAACGAGTACCAGCTGATTGACTGTGCCCAGTACTTCCTGGACAAGATCGACGTGATC AAGCAGGCTGACTATGTGCCGAGCGATCAGGACCTGCTTCGCTGCCGTGTCCTGACTTCTGGAATCTTTGAGACC CAGTGCTTCAACGATGTGACTGCCATCATCTTCGTGGTGGCCAGCAGCAGCTACAACATGGTCATCCGGGAGGAC AACCAGACCAACCGCCTGCAGGAGGCTCTGAACCTCTTCAAGAGCATCTGGAACAACAGATGGCTGCGCACCATC TCTGTGATCCTGTTCCTCAACAAGCAAGATCTGCTCGCTGAGAAAGTCCTTGCTGGGAAATCGAAGATTGAGGAC TACTTTCCAGAATTTGCTCGCTACACTACTCCTGAGGATGCTACTCCCGAGCCCGGAGAGGACCCACGCGTGACC CGGGCCAAGTACTTCATTCGAGATGAGTTTCTGAGGATCAGCACTGCCAGTGGAGATGGGCGTCACTACTGCTAC CCTCATTTCACCTGCGCTGTGGACACTGAGAACATCCGCCGTGTGTTCAACGACTGCCGTGACATCATTCAGCGC TTAAATGTGAGCAAAG

MQALRLRPALMEPGAFSGARPGLGGYSPPPEEAMPFEFDQPAQRGCSQLLLQVPDLAPGGPGAAGVPGAPPEEPQ
ALRPAKAGSRGGYSPPPEETMFELDGEGFGDDSPPPGLSRVIAQVDGSSQFAAVAASSAVRLTPAANAPPLWVP
GAIGSPSQEAVRPPSNFTGSSPWMEISGPPFEIGSAPAGVDDTPVNMDSPPIALDGPPIKVSGAPDKRERAERPP
VEEEAAEMEGAADAAEGGKVPSPGYGSPAAGAASADTAARAAPAAPADPDSGATPEDPDSGTAPADPDSGAFAAD
PDSGAAPAAPADPDSGAAPDAPADPDSGAAPDAPADPDAGAAPEAPAAPAAAETRAAHVAPAAPDAGAPTAPAAS
ATRAAQVRRAASAAPASGARRKIHLRPPSPEIQAADPPTPRPTRASAWRGKSESSRGRRVYYDEGVASSDDDSSG
DESDDGTSGCLRWFQHRRNRRRRKPQRNLLRNFLVQAFGGCFGRSESPQPKASRSLKVKKVPLAEKRRQMRKEAL
EKRAQKRAEKKRSKLIDKQLQDEKMGYMCTHRLLLLGAGESGKSTIVKQMRILHVNGFNGEGGEEDPQAARSNSD
GEKATKVQDIKNNLKEAIETIVAAMSNLVPPVELANPENQFRVDYILSVMNVPDFDFPPEFYEHAKALWEDEGVR
ACYERSNEYQLIDCAQYFLDKIDVIKQADYVPSDQDLLRCRVLTSGIFETKFQVDKVNFHMFDVGGQRDERRKWI
QCFNDVTAIIFVVASSSYNMVIREDNQTNRLQEALNLFKSIWNNRWLRTISVILFLNKQDLLAEKVLAGKSKIED
YFPEFARYTTPEDATPEPGEDPRVTRAKYFIRDEFLRISTASGDGRHYCYPHFTCAVDTENIRRVFNDCRDIIQR
MHLRQYELL

FIGURE 5830

AGGACCAGCGCAACGAGGAGAAGGCGCAGCGTGAGGCCAACAAAAAGATCGAGAAGCAGCTGCAGAAGGACAAGC AGGTCTACCGGGCCACGCACCGCCTGCTGCTGCTGGGTGCTGAGAATCTGGTAAAAGCACCATTGTGAAGCAGA TGAGGATCCTGCATGTTAATGGGTTTAATGGAGAGGGCGGCGAAGAGGACCCGCAGGCTGCAAGGAGCAACAGCG ATGGTGAGAAGGCAACCAAAGTGCAGGACATCAAAAACAACCTGAAAGAGGCGATTGAAACCATTGTGGCCGCCA TGAGCAACCTGGTGCCCCCGTGGAGCTGGCCAACCCCGAGAACCAGTTCAGAGTGGACTACATCCTGAGTGTGA GTGCCTGCTACGAACGCTCCAACGAGTACCAGCTGATTGACTGTGCCCAGTACTTCCTGGACAAGATCGACGTGA TCAAGCAGGCTGACTATGTGCCGAGCGATCAGGACCTGCTTCGCTGCCGTGTCCTGACTTCTGGAATCTTTGAGA TCCAGTGCTTCAACGATGTGACTGCCATCATCTTCGTGGTGGCCAGCAGCAGCTACAACATGGTCATCCGGGAGG ACAACCAGACCAACCGCCTGCAGGAGGCTCTGAACCTCTTCAAGAGCATCTGGAACAACAGATGGCTGCGCACCA TCTCTGTGATCCTGTTCCTCAACAAGCAAGATCTGCTCGCTGAGAAAGTCCTTGCTGGGAAATCGAAGATTGAGG ACTACTTTCCAGAATTTGCTCGCTACACTACTCCTGAGGATGCTACTCCCGAGCCCGGAGAGGACCCACGCGTGA $\verb|CCCGGGCCAAGTACTTCATTCGAGATGAGTTTCTGAGGATCAGCACTGCCAGTGGAGATGGGCGTCACTACTGCT|\\$ ACCCTCATTTCACCTGCGCTGTGGACACTGAGAACATCCGCCGTGTGTTCAACGACTGCCGTGACATCATTCAGC GCATGCACCTTCGTCAGTACGAGCTGCTC<u>TAA</u>GAAGGGAACCCCCAAATTTAATTAAAGCCTTAAGCACAATTAA AATTAAATGTGAGCAAAG

6312/6881 FIGURE 5831

MGCLGNSKTEDQRNEEKAQREANKKIEKQLQKDKQVYRATHRLLLLGAGESGKSTIVKQMRILHVNGFNGEGGEE DPQAARSNSDGEKATKVQDIKNNLKEAIETIVAAMSNLVPPVELANPENQFRVDYILSVMNVPDFDFPPEFYEHA KALWEDEGVRACYERSNEYQLIDCAQYFLDKIDVIKQADYVPSDQDLLRCRVLTSGIFETKFQVDKVNFHMFDVG GQRDERRKWIQCFNDVTAIIFVVASSSYNMVIREDNQTNRLQEALNLFKSIWNNRWLRTISVILFLNKQDLLAEK VLAGKSKIEDYFPEFARYTTPEDATPEPGEDPRVTRAKYFIRDEFLRISTASGDGRHYCYPHFTCAVDTENIRRV FNDCRDIIQRMHLRQYELL

PCT/US2003/028547

6313/6881 FIGURE 5832

AGGACCAGCGCAACGAGGAGAAGGCGCAGCGTGAGGCCAACAAAAAGATCGAGAAGCAGCTGCAGAAGGACAAGC AGGTCTACCGGGCCACGCACCGCCTGCTGCTGCTGGGTGCTGGAGAATCTGGTAAAAGCACCATTGTGAAGCAGA TGAGGATCCTGCATGTTAATGGGTTTAATGGAGACAGTGAGAAGGCAACCAAAGTGCAGGACATCAAAAACAACC TGAAAGAGGCGATTGAAACCATTGTGGCCGCCATGAGCAACCTGGTGCCCCCCGTGGAGCTGGCCAACCCCGAGA ATGCCAAGGCTCTGTGGGAGGATGAAGGAGTGCGTGCCTGCTACGAACGCTCCAACGAGTACCAGCTGATTGACT GTGCCCAGTACTTCCTGGACAAGATCGACGTGATCAAGCAGGCTGACTATGTGCCGAGCGATCAGGACCTGCTTC GCTGCCGTGTCCTGACTTCTGGAATCTTTGAGACCAAGTTCCAGGTGGACAAAGTCAACTTCCACATGTTTGACG $\tt TGGGTGGCCAGCGCGATGAACGCCGCAAGTGGATCCAGTGCTTCAACGATGTGACTGCCATCATCTTCGTGGTGG$ ${\tt CCAGCAGCAGCTACAACATGGTCATCCGGGAGGACAACCAGACCAACCGCCTGCAGGAGGCTCTGAACCTCTTCA}$ AGANAGTCCTTGCTGGGAAATCGAAGATTGAGGACTACTTTCCAGAATTTGCTCGCTACACTACTCCTGAGGATG CTACTCCCGAGCCCGGAGAGGACCCACGCGTGACCCGGGCCAAGTACTTCATTCGAGATGAGTTTCTGAGGATCA GCACTGCCAGTGGAGATGGGCGTCACTACTGCTACCCTCATTTCACCTGCGCTGTGGACACTGAGAACATCCGCC $\tt GTGTGTTCAACGACTGCCGTGACATCATTCAGCGCATGCACCTTCGTCAGTACGAGCTGCTC\underline{TAA}{GAAGGGAACC}$ ATAGGGCATGATTAACAAAGCAACCTTTCCCTTCCCCGAGTGATTTTGCGAAACCCCCTTTTCCCTTCAGCTTG CTTAGATGTTCCAAATTTAGAAAGCTTAAGGCGGCCTACAGAAAAAGGAAAAAAGGCCACAAAAGTTCCCTCTCA GTGTTGTGCAGCATTAAAAAAAATCAAAATAAAAATTAAATGTGAGCAAAG

6314/6881 FIGURE 5833

MGCLGNSKTEDQRNEEKAQREANKKIEKQLQKDKQVYRATHRLLLLGAGESGKSTIVKQMRILHVNGFNGDSEKA TKVQDIKNNLKEAIETIVAAMSNLVPPVELANPENQFRVDYILSVMNVPDFDFPPEFYEHAKALWEDEGVRACYE RSNEYQLIDCAQYFLDKIDVIKQADYVPSDQDLLRCRVLTSGIFETKFQVDKVNFHMFDVGGQRDERRKWIQCFN DVTAIIFVVASSSYNMVIREDNQTNRLQEALNLFKSIWNNRWLRTISVILFLNKQDLLAEKVLAGKSKIEDYFPE FARYTTPEDATPEPGEDPRVTRAKYFIRDEFLRISTASGDGRHYCYPHFTCAVDTENIRRVFNDCRDIIQRMHLR QYELL

6315/6881 FIGURE 5834

GGGTCGGCCGGGTGCTGGGCCGAGGCCGAGGCCGGGGCGGGATCCAGAGCGGGAGCCGGCGCGCGGATCTGGGAC ATCTGCCCAAGAGCTGGGACTGGCGCAATGTGGATGGTGTCAACTATGCCAGCATCACCCGGAACCAGCACATCC $\tt CCCAATACTGCGGCTCCTGCTGGGCCCACGCCACCACCACCACCACGCGCTATGGCGGATCGGATCAACATCAAGAGGAAGG$ GAGCGTGGCCCTCCACCCTCCTGTCCGTGCAGAACGTCATCGACTGCGGTAACGCTGGCTCCTGTGAAGGGGGGTA ATGACCTGTCCGTGTGGGACTACGCCCACCAGCACGCATCCCTGACGACACCTGCAACAACTACCAGGCCAAGG ACCAGGAGTGTGACAAGTTTAACCAATGTGGGACATGCAATGAATTCAAAGAGTGCCACGCCATCCGGAACTACA CCATCAGCTGTGGAATAATGGCAACAGAAAGACTGGCTAACTACACCGGAGGCATCTATGCCGAATACCAGGACA CCACATATATAAACCATGTCGTTTCTGTGGCTGGGTGGGGCATCAGTGATGGGACTGAGTACTGGATTGTCCGGA ATTCATGGGGTGAACCATGGGGGGAGAGGGCTGGCTGAGGATCGTGACCAGCACCTATAAGGATGGGAAGGGCG ${\tt CAGTTTAAGAAAAGGCATGGTGACCCATGACCAGAGGGGATCCTATGGTTATGTGTGCCAGGCTGGCAGGA}$ ACTGGGGTGGCTATCAATATTGGATGGCGAGGACAGCGTGGCACTGGCTGCGAGTGTTCCTGAGAGTTGAAAGTG GGATGACTTATGACACTTGCACAGCATGGCTCTGCCTCACAATGATGCAGTCAGCCACCTGGTGAAGAAGTGACC ${\tt TGCGACACGGAAACGATGGGACCTCAGTCTTCTTCAGCAGAGGACTTGATATTTTGTATTTTGCAACTGTGGGC}$ AATAATATGGCATTTAAGAGGTGAAAGAGTTCAGACTTATCACCATTCTTATGTCACTTTAGAATCAAGGGTGGG GGAGGGAGGGAGTTGCAGTTTCAAATCGCCCAAGTGATGAATAAAGTATCTGGCTCTGCACGAG

6316/6881 FIGURE 5835

MARRGPGWRPLLLLVLLAGAAQGGLYFRRGQTCYRPLRGDGLAPLGRSTYPRPHEYLSPADLPKSWDWRNVDGVN YASITRNQHIPQYCGSCWAHASTSAMADRINIKRKGAWPSTLLSVQNVIDCGNAGSCEGGNDLSVWDYAHQHGIP DETCNNYQAKDQECDKFNQCGTCNEFKECHAIRNYTLWRVGDYGSLSGREKMMAEIYANGPISCGIMATERLANY TGGIYAEYQDTTYINHVVSVAGWGISDGTEYWIVRNSWGEPWGERGWLRIVTSTYKDGKGARYNLAIEEHCTFGD PIV

6317/6881 FIGURE 5836

GCCGGCCTCGAACCCCCACAGCTGGAGGGCGAGGCCAGCTGTACCCGGCCCCAGTGCCCTTTCGCGGCCACAAGC GGCCGTCCTCCTGGTCCGGTGCTCCGGCGCCTGATCTAGGTTCATCGAGCCGGGGCTGTGGCTCCTTTTCGGGCT CACAGTGACCTCCGCCGCAGGATTCGTGCCTTGCTCCCAGTCTGGGGATGCTGGCAGGCGCGGGGTGTCCCAGGC TGGCGAGGGGACTGTGGCCCCGACAGCACTGCAGGGTCCAAGCCCTGGAAGCCCTGGGCAGGAGCAGGCGGCCGA GGGGGCCCCTGAGCACCACCGATCCAGGCGCTGCACGTGCTTCACCTACAAGGACAAGGAGTGTGTCTACTATTG CCACCTGGACATCATTTGGATCAACACTCCCGAACAGACGGTGCCCTATGGACTGTCCAACTACAGAGGAAGCTT $\verb|CCGGGGCAAGAGGTCTGCGGGGCCACTTCCAGGGAATCTGCAGCTCTCACATCGGCCACACTTGCGCTGCGCTTG|\\$ TGTGGGGAGATATGACAAGGCCTGCCTGCACTTTTGCACCCAAACTCTGGACGTCAGCAGTAATTCAAGGACGGC CCATCCAAAGCTCATGCCCGGCAGTGGACTCGCCCTCGCTCCATCTACCTGCCCCCGCTGCCTCTTTCAGGAAGG AGCCCCTTAGGAGGACAGGCCTGCAGCTCCAATTTCATGCAGGAAATTGGTTTTTGGAGAGTTTTTGGCAAGTTTGGA AAGCCACTTACTGGCTTTTGACATGACTTCTCTTGGAGAATAAGTGGACTCCAAGCTAACTCTTTGCAAATGTAA ACACATGTCCATCTTGTTAATAAATGCAAAATGCCCGTGCAGCAGAAGCATGCGACTTTCATATCCTTGCCTAGA ATAGGCTGCATGGTGTATGTCAGTGAGGGCCACGAGGCGTCGGCTTTAGACACAGATCATAGCTCTACAGGAGTT TATGAATTTGAAGCTTATGGGATTTTGGCAGAGAAATTTTCAGCTGTGCTTGATACCCACCAAAAGAATGTATCT CGAAAGAATGAAGGAAGAAAAAAGGATCCTTGATGTTTGTGACAAGAAAATGAGAAAGTTAGTATCTGCAAT ACAGAGCTTGTTCCTGTTCAGTGACTGACCCTCTGTATTCTGTATAGACACCAGGCCGATACACAGTGGAGTTCC ${\tt CAGGCCTTGTTTGCAGGAAGCCGACTGTAAAGACAGCCCCAGCTCAAGGCTATTAGGTTGAATATTTGCTTTCAT}$ CTGTTTATATATATGCCACCACTTATACCGTCTGACAGTTCAAAATCTCTTTCAGCTGCGCTCTTCCCACCGA GCCGAGCTTACTGTGAGTGTGGAGATGTTATCCCACCATGTAAAGTCGCCTGCGCAGGGGAGGGCTGCCCATCTC CCCAACCCAGTCACAGAGAGATAGGAAACGGCATTTGAGTGGGTGTCCAGGGCCCCGTAGAGAGACATTTAAGAT GGTGTATGACAGAGCATTGGCCTTGACCAAATGTTAAATCCTCTGTGTGTATTTCATAAGTTATTACAGGTATAA AAGTGATGACCTATCATGAGGAAATGAAAGTGGCTGATTTGCTGGTAGGATTTTGTACAGTTTAGAGAAGCGATT ATTTATTGTGAAACTGTTCTCCACTCCAACTCCTTTATGTGGATCTGTTCAAAGTAGTCACTGTATATACGTATA GAGAGGTAGATAGGTAGGTAGATTTTAAATTGCATTCTGAATACAAACTCATACTCCTTAGAGCTTGAATTACAT TTTTAAAATGCATATGTGCTGTTTGGCACCGTGGCAAGATGGTATCAGAGAGAAACCCATCAATTGCTCAAATAC TCAGAAAGTACTGTCAAAAGCCTAATAAAAAACCTAAAGTTTGCTCTG

 ${\tt MEPGLWLLFGLTVTSAAGFVPCSQSGDAGRRGVSQAPTAARSEGDCEETVAGPGEETVAGPGEGTVAPTALQGPS} \\ {\tt PGSPGQEQAAEGAPEHHRSRRCTCFTYKDKECVYYCHLDIIWINTPEQTVPYGLSNYRGSFRGKRSAGPLPGNLQ} \\ {\tt LSHRPHLRCACVGRYDKACLHFCTQTLDVSSNSRTAEKTDKEEEGKVEVKDQQSKQALDLHHPKLMPGSGLALAP} \\ {\tt STCPRCLFQEGAP} \\ \\$

6320/6881 FIGURE 5839

MSYDRAITVFSPDGHLFQVEYAQEAVKKGSTAVGVRGRDIVVLGVEKKSVAKLQDERTVRKICALDDNVCMAFAG LTADARIVINRARVECQSHRLTVEDPVTVEYITRYIASLKQRYTQSNGRRPFGISALIVGFDFDGTPRLYQTDPS GTYHAWKANAIGRGAKSVREFLEKNYTDEAIETDDLTIKLVIKALLEVVQSGGKNIELAVMRRDQSLKILNPEEI EKYVAEIEKEKEENEKKKQKKAS

6321/6881 FIGURE 5840A

GCAGCCGGAGTATCCACCTCGATGACCACGGGCTGAGCCCCGCGCCGCCACCATGTCCGTGGCCTTCGCGTCTGC CCGGCCAAGAGGCAAAGGGGAGGTTACGCAGCAAACCATCCAGAAGATGCTGGACGAGAACCACCACCTGATCCA GTGCATCCTGGAGTACCAGAGCAAGGGCAAGACGGCCGAGTGCACGCAGTACCAGCAGATCCTGCACCGGAACCT GGTATACCTGGCCACGATCGCAGACTCCAACCAGAACATGCAGTCCCTGCTTCCTGCCCCGCCCACGCAGAACAT CATCAGCACGGGCCTGCCACCCTCCCTCCTGCAGGGCCAGATTGGCAACGGGCCGAGCCACGTGTCCATGCA GCAGACGGCGCCTAACACGCTGCCCACCACCTCCATGAGCATCTCTGGGCCCGGCTACAGCCACGCGGGACCCGC CTCGCAGGGCGTCCCCATGCAGGGCAAGGCACCATCGGCAACTACGTGTCTCGGACCAACATCAACATGCAGTC CCAGGGCCAGTCGTCCATCGCCATGATGGGGCAGGCAGCCAGGGGGAGCATGATGGGGCAGCGGCCCATGGC GCCCTACCGGCCCTCCCAGCAAGGCTCTTCCCAGCAGTACCTGGGCCAGGAGGAGTACTATGGCGAGCAGTACAG CCACAGCCAGGGCGCGCGGAGCCCATGGGCCAGCAGTACTACCCCGACGGCCATGGCGATTACGCCTACCAGCA GTCATCCTACACGGAGCAGAGCTACGACCGGTCCTTCGAGGAGTCCACGCAGCACTACTATGAGGGGGGAAACTC CCAGTACAGCCAGCAGGCCGGGTACCAGCAGGGTGCCGCGCAGCAGCAGACGTACTCCCAGCAGCAGTACCC CAGCCAGCAGAGCTACCCCGGGCAGCAGCAGGGCTACGGGTCTGCCCAGGGAGCCCCGTCACAGTACCCCGGCTA CCAGCAAGGCCAAGGCCAGCAGTACGGAAGCTACCGAGCACCGCAGCAGCGCCGCCGTCTGCCCAGCAGCAGCGGCC AGCGTGTTCATCCAGGGGCCGGATGGGCTGGCGGCAGCTCTGGTGAATTGTGACATGTTGGTTACCTGTTCGCCC AGTGCCACGTCTGCATGTGAAGCGTGCTCATTTCATGCTGGGTATGACGCCGAGCGCACACCACTGGCGTGAGAC AGCGCTTGGTGGTGTGATACTTTTGGTGCTGTGTATAGTATTGTTGTCGGTACACGGAGAGGTATCCTTTTTTT GTCCCCGCCCCTTCTCAATGTTTCTAGCTAGCTTTGGGGGTCATTTTGTCATCAGAGCATTCTGTGCCCAGGG ACAGGACAGATCTCGAGGACACCACAGTCCACCTGTTCCCGTCAACAGACGTTAGGTCTCATTTTCCTCCTCATG CAGTGTTGTAGTGTGGGTTGTCAACTTTTCTTTAACTGGCTACGCCACAGCTGGACACACATGCAGCCCCTGGAG GGCAGCCTCTTCCTGTGCCTCGATGGGGTGGGTGGGAGGGCATCTTCTGTGCGTTGGGTCAGTTTCTGTTACGTA ACGAAAAGGATAAACATCTCCCACGGGAGAGGCCACAGATGGCCACTTCCAGAGCTTGCCCATTGCCTGTCTCTC GCCAATTCCGTTTATCCAAAAAGGTACATGTTTTTGTATTAAAAAGTAAACAGGGATCAGTGACTGTATTCCAAA TAAATATGAATCCCTAAGGGCCGTGGACAAATTGCCTAACCCAGGGCCAGCGGTATTGCTGAAGGAAAGGGGCAG CTCTCTGGGAAGTGGGCCCTCAGAGATTACTCTGGCTTTGACCCTTGTTTAGCTGATGGTCATTTCTGGGATTGG AATATTTAATAAGCCCAATTCTAAGTTGATAGGTAATTTTAAATATTCAAACCAAATCTTCCCAACAGTTGGCAA GAGTAATTTTTACATTTCTAAGACATTAAATCCCATTTAAATTCTGTGTGAACATTAAAGACAGCACACTTGCAA AAGTATGGTCAAAGGAAAAAAATCCCACATTTCAATTAACAAGTAGCATGGACATTTGATCAACCTTTAGTTGGA ATAATAATATTCATATTTGCTATGAATCCTTTTAAAAAAATCTTTGGATAAATGCTGACAGATTTCCAAGAACTA CCAAGAAAATACAAGAGATATCCAATGCTTGATATATGAGGCCTAGTAATAACGATATTTCTCTTTAATTGATGT TTTGTTTTAAAAGTTAAAAGTAATTCTTGGCGTGGTGGTTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAAG CGGGCGGATCACCTGAGGTCGGGAGTTCGAGACCAGCCTGACCAACATGGAGAAACCCCGTCCCTACTAAAAATA CAAAATTAGCCAGGTATGGTGGTGCATACCTGTAATCCCAGCTACTCGGGAACCTGAGGCAGGAGAATGGCTTGA ACCCAGGAGACAGAGGTTGTGGTGGGGCAAGATCGCACCATTGCACCCGAGCCTAGGCAACAAGAGTGAAATTCC GTCTCAAAAAAATAAATAAATAAATAAATAAATAAGTTAAAATTAATTCTTTATCCAGAGTCGGGTGCTTTAGAA TTTATAAGTCACTTATGTGTTTTGCTTGAATTAATTCTGACAGCCCCTATGAGGAAATCTGGAGGCAGGTAACAG TTCCCATTTTAGAGATGAAGAACTGAGGCACAGATTAAAGGACTTGCCTGTTGAATACCAGTCCTGTTCTAGG ACATTCTCCCCTCTCCTAGGAGACGGATGTCACGCACAAATGGGGAGAGAGTGTTTATTTTGTAGGCACTAAGG GTTTCTAAAACCCTTAACACTGGTAAGGGCTCAAAAATAAACGTATGTGTTCATATTCGATCACCGAAATGAGAG TTCTTAATTGCTAATTGACAAACGCGTTAGCAATTTCAGTTAGGGAGTCATCTCCCTTGATTGTGTTCTTTTCCT GTCAATTTTCATAGACCTAATTTGCAAACTCAATCGGGGACTAAAATTTCCCACTGAAAATGTTAAACATTTTAG ATAACTGTGAAGATAGTTTATTTTTATTCCTTGCCAATCTGGGAATATGCCTTTTTTGTGTGTTTTGTGTGTTTTTT TTAAGTGCTGTATTAATAATACTTTCTGAAAGAAAAGGACACTTACCCCAAAACTTCAATCTGAAATGTCTTACA

6322/6881 FIGURE 5840B

6323/6881 FIGURE 5841

MSVAFASARPRGKGEVTQQTIQKMLDENHHLIQCILEYQSKGKTAECTQYQQILHRNLVYLATIADSNQNMQSLL PAPPTQNMNLGPGALTQSGSSQGLHSQGSLSDAISTGLPPSSLLQGQIGNGPSHVSMQQTAPNTLPTTSMSISGP GYSHAGPASQGVPMQGQGTIGNYVSRTNINMQSNPVSMMQQQAATSHYSSAQGGSQHYQGQSSIAMMGQGSQGSS MMGQRPMAPYRPSQQGSSQQYLGQEEYYGEQYSHSQGAAEPMGQQYYPDGHGDYAYQQSSYTEQSYDRSFEESTQ HYYEGGNSQYSQQQAGYQQGAAQQQTYSQQQYPSQQSYPGQQQGYGSAQGAPSQYPGYQQGQQQYGSYRAPQTA PSAQQQRPYGYEQGQYGNYQQ

6324/6881 FIGURE 5842

 ${\tt GGGGCC} \underline{\textbf{ATG}} \texttt{GCACCTGCAAGGTGTTTCTCAGCAAGATTGAGGACCGTGTTTCAGGGCGTGGGGCATTGGGCTTTG}$ GCGGACCTCGCCAAGCATCAGGAACTCCCGGGGAAGAAGCTGCTCTCTGAGAAAAAGCTGAAAAAGGTACTTTGTG GACTATCGGAGAGTGCTTGTCTGTGGAGGAAACGGAGGCGCTGGGGCAAGCTGCTTCCACAGTGAGCCCCGCAAG GAGTTTGGAGGCCCTGATGGAGGGGACGGAGGCAACGGTGGACACGTCATTCTGAGAGTTGACCAGCAAGTCAAG TCTTGCGTGGGAGATGAGTACATTGCCGCGCTGGGCGGGGGAGGGGAAAGGCAACCGCTTCTTCCTGGCCAAC AACAACCGTGCCCCTGTGACCTGTACCCCTGGACAGCCAGGACAGCAGCAGCTCTCCACCTGGAGCTCAAGACG GTGGCCCACGCCGGAATGGTGGGATTCCCCAACGCCGGGAAGTCCTCACTGCTCCGGGCCATTTCAAACGCCAGA CCCGCCGTGGCTTCCTACCCGTTCACCACCCTGAAGCCCCACGTCGGGATCGTCCACTACGAAGGCCACCTACAA ATAGCAGTGGCCGACATCCCCGGCATCATACGAGGCGCCCACCAGAACAGGGGTCTGGGGTCCGCCTTCCTCAGG CACATCGAGCGCTGCCGCTTTCTCTTGTTCGTGGTGGATCTTTCTCAGCCTGAGCCGTGGACTCAAGTTGACGAT TTAAAATATGAACTGGAGATGTATGAAAAGGGCCTGTCTGCGAGGCCCCACGCAATCGTCGCAAACAAGATTGAC CTCCCTGAAGCCCAAGCCAATCTGTCCCAGCTCCGGGATCACTTGGGACAGGAGGTCATCGTGCTGTCGGCGTTG ACCGGCGAGAACCTGGAGCAGCTGCTGTTGCACCTGAAGGTGCTGTATGACGCCTACGCGGAGGCCGAGCTGGGC GTGTGAATTCGGTGGTTTTGAATGCATAAAGTGCCTTGTGGACACGGGGGAGTTGTGGTGCTTCTGGGTCTCTGG GCCCGCCTGCTGGCCTGAGATGCCCTCATGTTGGGAAGCATTCCGTGCCCCTACCCCGCCTGCCCTCCGTATT TCCTGCACCTGTCAGCCTGCACCGACTGATGAGCCAGTTGCTCATTTGTGCTGATTAACACCCCTAATAAGGGGT TGGGGTGCCCATAACGGGGTGGCCCTGCCGCTGACTCAGGTCTCCGCCATGCACGCGTGGACTCTCGGATGAGCT ${\tt CAGCAGAACCGCACAGCCCAGGTCAGAAGTGCAGACCAGGGTTCTCAGCACAGTGCCCGTCGTGCTTC}$ CATGGCTTGCTACGGAGAGACCTCTGGATCCACACTGGGGCTGCGTCTGGCCCGTTGTCCAGCAGCCCTGCGG TACCGCAAGCCCAGGCACCAGTGTCTCGGGGGGCCTCACTGCTGCGCAAGGGGTGGGGCCGAGGATGCAAGTCCA GGCAGAGCGGCGCAGGCAGCTGTGAGCTTTTCTCCATCAGCCGTCTGAGAAGAGCAGTGAGGCCAGCTGCTTCCT GTCCTTCAGAACACTTCTCTGTGCTCAGTGGGAGCCAGGAAGCCTCAGGCTTCACGACTGAATGCACCCAATATC CGACCTGGCTGCGTGTTTCTGGCTGGCTGCCGTGTGCACAGCAAGTTAACTAGAGGGGCTGTGGGCCATGGAAC TGTCAGCGTTATTCTCAGAAGGCGGCCGTGGCATGGGCAGGGTATAGTGAGGAGTGGAAGGAGAGTGTGCCTGG TAATATGGGGCGGAATTTCCACTCAGCTCCATTTGCTGGGGATTTAAAGAGAACCCTTGTGCTACGCCAGGCAGT TACCGAGCCGAAGGGAGATGATGGCCCTTCGCCCCTCAGTGGGATGGCAGCTGAGGGGGCCCTGCATTTGACCGT CGAGACTGCAGCAGCGCCTTTCCTGTCTGTGGTTTAAGTCTTTGCAGTCAAGTACTGATGCATCCAAGCCAGGCC $\tt CTCCAGAGGCTGTCGTGGGAGGATCATGTGAGCCTGGGAGGTCAAGGCTGCAGTGAGCCGTGATTGCACCACTGC$ GGCACGGTGGCTCATGCCTGTAGTCCCAGCACTTTGGGAGGCCGAGGCTGGTGGATCACAAGGTCAGGAGATTGA GACCATCCTGGCTAACACAGTGAAACCCCGTCTCTACTAAAAATACAAAAAATTAGCCAGGCGTGGTGGCGGTC ACCTGTAGTCCCAGCTACTCGGGAGGCTGAAGCAGGAGAATGGCGTGAACCTGGGAGGCGGAGCTTGCAGTGAGC CGAGATCACACCACTGCACTCCAGCCTGAGCGACAGAGCAAGACTCCATCTC

6325/6881 FIGURE 5843

MAPARCFSARLRTVFQGVGHWALSTWAGLKPSRLLPQRASPRLLSVGRADLAKHQELPGKKLLSEKKLKRYFVDY RRVLVCGGNGGAGASCFHSEPRKEFGGPDGGDGGNGGHVILRVDQQVKSLSSVLSRYQGFSGEDGGSKNCFGRSG AVLYIRVPVGTLVKEGGRVVADLSCVGDEYIAALGGAGGKGNRFFLANNNRAPVTCTPGQPGQQRVLHLELKTVA HAGMVGFPNAGKSSLLRAISNARPAVASYPFTTLKPHVGIVHYEGHLQIAVADIPGIIRGAHQNRGLGSAFLRHI ERCRFLLFVVDLSQPEPWTQVDDLKYELEMYEKGLSARPHAIVANKIDLPEAQANLSQLRDHLGQEVIVLSALTG ENLEQLLLHLKVLYDAYAEAELGQGRQPLRW

6326/6881 FIGURE 5844

GCGAGCCCGGACGCCCTCTCGAACGAGTGTGGGCGCGCGAGGCAGGATGACGACCTCAGGCGCGCTCTTTCCAAG $\tt CTGGAAGGACGGCGGGAACGTGGAAGACGACTTGATCATCTTCCCTGACGACTGTGAGTTCAAGCGGGT$ GCCGCAGTGCCCCAGCGGGAGGGTCTACGTGCTGAAGTTCAAGGCAGGGTCCAAGCGGCTTTTCTTCTGGATGCA GGAACCCAAGACAGGATGAGGAGCATTGCCGGAAAGTCAACGAGTATCTGAACAACCCCCCGATGCCTGG GGCACTGGGGGCCAGCGGAACGAGCGGCCACGAACTCTCTGCGCTAGGCGGTGAGGGTGGCCTGCAGAGCCTGCT ${\tt GAGCCAGTCGGCAGCGGTCACCCGTCATCCACCACCTCTTCCACCGTGCCACCCCAGCCCCTTCTGCTCCAGC}$ GCCCATCCAGCTGAGCGACCTCCAGAGCATCCTGGCCACGATGAACGTACCAGCCGGGCCAGCAGGCGGCCAGCA AGTGGACCTGGCCAGTGTGCTGACGCCGGAGATAATGGCTCCCATCCTCGCCAACGCGGATGTCCAGGAGCGCCT GCTTCCCTACTTGCCATCTGGGGAGTCGCTGCCGCAGACCGCGGATGAGATCCAGAATACCCTGACCTCGCCCCA GTTCCAGCAGGCCTGGGCATGTTCAGCGCAGCCTTGGCCTCGGGGCAGCTGGGCCCCCTCATGTGCCAGTTCGG TCTGCCTGCAGAGGCTGTGGAGGCCGCCAACAGGGCGATGTGGAAGCGTTTGCCAAAGCCATGCAGAACAACGC GCGCCGTCCTCCGAGGAACTGGGCGCTTGCAGTGCGTTGCACACCCTCACCTCCCACCACTGATTATTAATAAA GTCTTTTCCTTTACCTGCAAAAAAA

6327/6881 FIGURE 5845

 $\label{thm:continuous} $$\operatorname{MTTSGALFPSLVPGSRGASNKYLVEFRAGKMSLKGTTVTPDKRKGLVYIQQTDDSLIHFCWKDRTSGNVEDDLII$$ $$\operatorname{PDDCEFKRVPQCPSGRVYVLKFKAGSKRLFFWMQEPKTDQDEEHCRKVNEYLNNPPMPGALGASGTSGHELSAL$$ $$\operatorname{GGEGGLQSLLGNMSHSQLMQLIGPAGLGGLGGLGALTGPGLASLLGSSGPPGSSSSSSSSSSSSSAAVTPSSTTSST$$$$$\operatorname{RATPAPSAPAAASATSPSPAPSSGNGASTAASPTQPIQLSDLQSILATMNVPAGPAGGQQVDLASVLTPEIMAPI$$$$$\operatorname{LANADVQERLLPYLPSGESLPQTADEIQNTLTSPQFQQALGMFSAALASGQLGPLMCQFGLPAEAVEAANKGDVE$$$$$$$$$\operatorname{AFAKAMQNNAKPEQKEGDTKDKKDEEEDMSLD}$$

6328/6881 FIGURE 5846A

CCCACCGAGGACCTTTACTGCAAGCTGGTAGGGGGCCCCGTGGCCGGCGGCGACCCCAACCAGACCATCCGGGGC CAGTACTGTGACATCTGCACGGCTGCCAACAGCAACAAGGCACCCCCGCGAGCAATGCCATCGATGGCACGGAG CGCTGGTGGCAGAGTCCACCGCTGTCCCGCGGCCTGGAGTACAACGAGGTCAACGTCACCCTGGACCTGGGCCAG ATGGACTTCGGCCGCACCTACCAGCCCTGGCAGTTCTTTGCCTCCTCCAAGAGGGACTGTCTGGAGCGGTTCGGG CCACAGACGCTGGAGCGCATCACACGGGACGACGCGGCCATCTGCACCACCGAGTACTCACGCATCGTGCCCCTG GAGAACGGAGAGATCGTGGTGTCCCTGGTGAACGGACGTCCGGGCGCCATGAATTTCTCCTACTCGCCGCTGCTA CGTGAGTTCACCAAGGCCACCAACGTCCGCCTGCGCTTCCTGCGTACCAACACGCTGCTGGGCCATCTCATGGGG AAGGCGCTGCGGGACCCCACGGTCACCCGCCGGTATTATTACAGCATCAAGGATATCAGCATCGGAGGCCGCTGT GTCTGCCACGGCCACGCGGATGCCTGCGATGCCAAAGACCCCACGGACCCGTTCAGGCTGCAGTGCACCTGCCAG CACAACACCTGCGGGGGCACCTGCGACCGCTGCCCCGGCTTCAATCAGCAGCCGTGGAAGCCTGCGACTGCC AACAGTGCCAACGAGTGCCAGTCCTGTAACTGCTACGGCCATGCCACCGACTGTTACTACGACCCTGAGGTGGAC CGGCGCCGCGCCAGCCAGAGCCTGGATGGCACCTATCAGGGTGGGGGTGTCTGTATCGACTGCCAGCACCACACC ACCGGCGTCAACTGTGAGCGCTGCCTGCCCGGCTTCTACCGCTCTCCCAACCACCCTCTCGACTCGCCCCACGTC TGCCGCCGCTGCAACTGCGAGTCCGACTTCACGGATGGCACCTGCGAGGACCTGACGGGTCGATGCTACTGCCGG CCCAACTTCTCTGGGGAGCGGTGTGACGTGTGTGCCGAGGGCTTCACGGGCTTCCCAAGCTGCTACCCGACGCCC TCGTCCTCCAATGACACCAGGGAGCAGGTGCTGCCAGCCGGCCAGATTGTGAATTGTGACTGCAGCGGCGGCAGGG TGTGAGCTCTGCGCGCCCAGGGTTCTACGGCCCCGGCTGCCAGCCCTGCCAGTGTTCCAGCCCTGGAGTGGCCGAT GACCGCTGTGACCCTGACACAGGCCAGTGCAGGTGCCGAGTGGGCTTCGAGGGGGCCACATGTGATCGCTGTGCC CCCGGCTACTTCACTTCCCTCTCTGCCAGTTGTGTGGCTGCAGCCCTGCAGGAACCTTGCCCGAGGGCTGCGAT GAGGCCGCCGCTGCCTATGCCAGCCTGAGTTTGCTGGACCTCATTGTGACCGGTGCCGCCCTGGCTACCATGGT TTCCCCAACTGCCAAGCATGCACCTGCGACCCTCGGGGAGCCCTGGACCAGCTCTGTGGGGCGGGAGGTTTGTGC CGCTGCCGCCCCGGCTACACAGGCACTGCCTGCCAGGAATGCAGCCCCGGCTTTCACGGCTTCCCCAGCTGTGTC CCCTGCCACTGCTCTGCAGGCTCCCTGCACGCAGCCTGTGACCCCCGGAGTGGGCAGTGCAGCTGCCGGCCC CGTGTGACGGGGCTGCGGTGTGACACATGTGTGCCCGGTGCCTACAACTTCCCCTACTGCGAAGCTGGCTCTTGC CACCCTGCCGGTCTGGCCCCAGTGGATCCTGCCCTTCCTGAGGCACAGGTTCCCTGTATGTGCCGGGCTCACGTG GAGGGGCCGAGCTGTGACCGCTGCAAACCTGGGTTCTGGGGACTGAGCCCCAGCAACCCCGAGGGCTGTACCCGC TGCAGCTGCGACCTCAGGGGCACACTGGGTGGAGTTGCTGAGTGCCAGCCGGGCACCGGCCAGTGCTTCTGCAAG $\tt CCCCACGTGTGCGGCCAGGCCTGCGCGTCCTGCAAGGATGGCTTCTTTGGACTGGATCAGGCTGACTATTTTGGC$ TGCCGCAGCTGCCGGTGTGACATTGGCGGTGCACTGGGCCAGAGCTGTGAACCGAGGACGGCGTCTGCCGGTGC CGCCCCAACACCCAGGGCCCCACCTGCAGCGAGCCTGCGAGGGACCACTACCTCCCGGACCTGCACCACCTGCGC CTGGAGCTGGAGGAGGCTGCCACACCTGAGGGTCACGCCGTGCGCTTTGGCTTCAACCCCCTCGAGTTCGAGAAC TTCAGCTGGAGGGGCTACGCGCAGATGGCACCTGTCCAGCCCAGGATCGTGGCCAGGCTGAACCTGACCTCCCCT GCCTTCATCACCGTGCCCCAGAGGGGCTTCGGAGAGCCCTTTGTGCTGAACCCTGGCACCTGGGCCCTGCGTGTG GAGGCCGAAGGGGTGCTCCTGGACTACGTGGTTCTGCTGCCTAGCGCATACTACGAGGCGGCGCTCCTGCAGCTG CCCCTGGATGGCTTCCCCTCGGCCGGCCGGGCTGGAGGCCCTGTGTCGCCAGGACAACAGCCTGCCCCGGCCCTGC CCCACGGAGCAGCTCAGCCCGTCGCACCGCCACTGATCACCTGCACGGGCAGTGATGTGGACGTCCAGCTTCAA GTGGCAGTGCCACAGCCAGGCCGCTATGCCCTAGTGGTGGAGTACGCCAATGAGGATGCCCGCCAGGAGGTGGGC TGCCGGGGCACTGCCCGGGATACCCAGGACCACCTGGCTGTCTTCCACCTGGACTCGGAGGCCAGCGTGAGGCTC ACAGCCGAACAGGCACGCTTCTTCCTGCACGGGGTCACTCTGGTGCCCATTGAGGAGTTCAGCCCGGAGTTCGTG

6329/6881 FIGURE 5846B

GAGCCCGGGTCAGCTGCATCAGCAGCCACGGCGCCTTTGGCCCCAACAGTGCCGCCTGTCTGCCCTCGCGCTTC CCAAAGCCGCCCAGCCCATCATCCTCAGGGACTGCCAGGTGATCCCGCTGCCGCCCGGCCTCCCGCTGACCCAC GCGCAGGATCTCACTCCAGCCATGTCCCCAGCTGGACCCCGACCTCGGCCCCCACCGCTGTGGACCCTGATGCA GAGCCCACCTGCTGCGTGAGCCCCAGGCCACCGTGGTCTTCACCACCCATGTGCCCACGCTGGGCCGCTATGCC CAGGGCCACGCCAACGCCAGCTTCTGTCCACATGGCTACGGCTGCCGCACCCTGGTGGTGTGTGAGGGCCAGGCC GTACTCGTGGTCCCTGAGAACGTCTACAGCTTTGGCTACCTCCGGGAGGAGCCCCTGGATAAATCCTATGACTTC ATCAGCCACTGCGCAGCCCAGGGCTACCACATCAGCCCCAGCAGCTCATCCCTGTTCTGCCGAAACGCTGCTGCT TCCCTCTCCTCTTATAACAACGGAGCCCGTCCATGTGGCTGCCACGAAGTAGGTGCTACAGGCCCCACGTGT GAGCCCTTCGGGGGCCAGTGTCCCTGCCATGCCCATGTCATTGGCCGTGACTGCTCCCGCTGTGCCACCGGATAC TGGGGCTTCCCCAACTGCAGGCCCTGTGACTGCGGTGCCCGCCTCTGTGACGAGCTCACGGGCCAGTGCATCTGC CCGCCACGCACCATCCCGCCCGACTGCCTGCTGCCAGCCCCAGACCTTTGGCTGCCACCCCCTGGTCGGCTGT AAGTGCAGACCCAACGTGACTGGGCGCCGCTGTGATACCTGCTCTCCGGGCTTCCATGGCTACCCCCGCTGCCGC CCCTGTGACTGTCACGAGGCGGGCACTGCGCCTGGCGTGTGTGACCCCCTCACAGGGCAGTGCTACTGTAAGGAG AACGTGCAGGGCCCCAAATGTGACCAGTGCAGCCTTGGGACCTTCTCACTGGATGCTGCCAACCCCAAAGGTTGC ACCCGCTGCTTCTGCTTTGGGGCCACGGAGCGCTGCCGGAGCTCGTCCTACACCCGCCAGGAGTTCGTGGATATG GAGGGATGGGTGCTGAGCACTGACCGGCAGGTGGTGCCCCACGAGCGGCAGCCAGGGACGGAGATGCTCCGT GCAGACCTGCGGCACGTGCCTGAGGCTGTGCCCGAGGCTTTCCCCGAGCTGTACTGGCAGGCCCCACCCTCCTAC CTGGGGGACCGGGTGTCATCCTACGGTGGGACCCTCCGTTATGAACTGCACTCAGAGACCCAGCGGGGAGATGTC TTTGTCCCCATGGAGAGCAGGCCGGATGTGGTGCTGCAGGGCAACCAGATGAGCATCACATTCCTGGAGCCGGCA TACCCCACGCCTGGCCACGTTCACCGTGGGCAGCTGCAGCTGGTGGAGGGGAACTTCCGGCATACGGAGACGCGC AACACTGTGTCCCGCGAGGAGCTCATGATGGTGCTGGCCAGCCTGGAGCAGCTGCAGATCCGTGCCCTCTTCTCA CAGATCTCCTCGGCTGTCTTCCTGCGCAGGGTGGCACTGGAGGTGGCCAGCCCAGCAGGCCAGGGGCCCTGGCC AGCAATGTGGAGCTGTGCCCGGCCAGCTACCGGGGGGACTCATGCCAGGAATGTGCCCCCGGCTTCTAT CGGGACGTCAAAGGTCTCTTCCTGGGCCGATGTGTCCCTTGTCAGTGCCATGGACACTCAGACCGCTGCCTCCCT AGCAGCAGGGACGACCCCAGCGCCCCCTGTGTCAGCTGCCCCTGCCCCTCTCAGTGCCTTCCAACAACTTCGCC GAGGGCTGTGTCCTGCGAGGCGGCCGCACCCAGTGCCTCTGCAAACCTGGTTATGCAGGTGCCTCCTGCGAGCGG CCCGCTGCGAGATCTGTGCCCCCGGCTTCTACGGCAACGCCCTGCTGCCCGGCAACTGCACCCGGTGCGACTGT TGTGACCGCTGCCAGGAGGGACATTTTGGTTTCGATGGCTGCGGGGGGCTGCCGCCCGTGTGCTTGTGGACCGGCC GCCGAGGGCTCCGAGTGCCACCCCAGAGCGGACAGTGCCACTGCCGACCAGGGACCATGGGACCCCAGTGCCGC GAGTGTGCCCCTGGCTACTGGGGGCTCCCTGAGCAGGGCTGCAGGCGCTGCCAGTGCCCTGGGGGCCGCTGTGAC GTGCCTGTTCCAGGCGGGCCTGTGGGCCACAGCATCCACTGTGAAGGTTGTGTGACCACTGTGTGGTCCTGCTCC TGGATGACCTGGAACGGCCCGCCCTCCCCCCCCATTCACGAGCAACTGCGTGGCATCAATGCCAGCTCCA TGGCCTGGGCCCGTCTGCACAGGCTGAACGCCTCCATCGCTGACCTGCAGAGCCAGCTCCGGAGCCCCCTGGGCC CCCGCCATGAGACGGCACAGCAGCTGGAGGTGCTGGAGCAGCAGAGCACAAGCCTCGGGCAGGACGCACGGCGGC TAGGCGGCCAGGCCGTGGGGACCCGAGACCAGGCGAGCCAATTGCTGGCCGGCACCGAGGCCACACTGGGCCATG GGCTGGCCAATGCCTCGGCTCCATCAGGTGAGCAGCTGCTCCGGACACTGGCCGAGGTGGAGCGGCTGCTCTGGG AGATGCGGGCCCGGGACCTGGGGGCCCCGCAGGCAGCAGCTGAGGCTGAGTTGGCTGCAGCACAGAGATTGCTGG CCCGGGTGCAGGAGCAGCTGAGCAGCCTCTGGGAGGAGAACCAGGCACTGGCCACACAAACCCGCGACCGGCTGG CCCAGCACGAGGCCGGCCTCATGGACCTGCGAGAGGCTTTGAACCGGGCAGTGGACGCCACACGCGGAGGCCCAGG

6330/6881 FIGURE 5846C

AGCTCAACAGCCGCAACCAGGAGCGCCTGGAGGAAGCCCTGCAAAGGAAGCAGGAGCTGTCCCGGGACAATGCCA CCCTGCAGGCCACTCTGCATGCGGCTAGGGACACCCTGGCCAGGCTCTTCAGATTGCTGCACAGCCTGGACCAGG CTAAGGAGGAGCTGGAGCGCCTCGCCGCCAGCCTGGATGGGGCTCGGACCCCACTGCTGCAGAGGATGCAGACCT TCTCCCGGGGGGGCAGCAGCTGCGTCTAGTGGAGGCCGCCGAGGCCCACGCACAGCAGCTGGGCCAGCTGGCAC TCAATCTGTCCAGCATCATCCTGGACGTCAACCAGGACCGCCTCACCCAGAGGGCCATCGAGGCCTCCAACGCCT ACAGCCGCATCCTGCAGGCCGTGCAGGCTGCCGAGGATGCTGCTGGCCAGGCCCTGCAGCAGGCGGACCACACGT GGGCGACGGTGGTGCGGCAGGGCCTGGTGGACCGAGCCCAGCAGCTCCTGGCCAACAGCACTGCACTAGAAGAGG CCATGCTCCAGGAACAGCAGAGGCTGGGCCTTGTGTGGGCTGCCCTCCAGGGTGCCAGGACCCAGCTCCGAGATG TCCGGGCCAAGAAGGACCAGCTGGAGGCGCACATCCAGGCGGCGCAGGCCATGCTTGCCATGGACACAGACGAGA CAAGCAAGAAGATCGCACATGCCAAGGCTGTGGCTGCTGAAGCCCAGGACACCGCCACCCGTGTGCAGTCCCAGC TGCAGGCCATGCAGGAGAATGTGGAGCGGTGGCAGGGCCAGTACGAGGGCCTGCGGGGCCAGGACCTGGGCCAGG CAGTGCTTGACGCAGGCCACTCAGTGTCCACCCTGGAGAAGACGCTGCCCCAGCTGCCCAAGCTGACCATCA TGGAGAACCGTGGGGTGCACAACGCCAGCCTGGCCCTGTCCGCCAGCATTGGCCGCGTGCGAGAGCTCATTGCCC AGGCCCGGGGGGCTGCCAGTAAGGTCAAGGTGCCCATGAAGTTCAACGGGCGCTCAGGGGTGCAGCTGCGCACCC CACGGGATCTTGCCGACCTTGCCTACACTGCCCTCAAGTTCTACCTGCAGGGCCCAGAGCCTGAGCCTGGGC AGGGTACCGAGGATCGCTTTGTGATGTACATGGGCAGCCGCCAGGCCACTGGGGACTACATGGGTGTCTCTCTGC GTGACAAGAAGGTGCACTGGGTGTATCAGCTGGGTGAGGCGGGCCCTGCAGTCCTAAGCATCGATGAGGACATTG GGGAGCAGTTCGCAGCTGTCAGCCTGGACAGGACTCTCCAGTTTGGCCACATGTCCGTCACAGTGGAGAGACAGA TGATCCAGGAAACCAAGGGTGACACGGTGGCCCCTGGGGCAGAGGGGCTGCTCAACCTGCGGCCAGACGACTTCG TCGAGATGGACACGCTGAATGAGGAGGTGGTCAGCCTCTACAACTTCGAGAGGACCTTCCAGCTGGACACGGCTG GCTTCGCCCGCATCAGCTTCGACAGTCAGATCAGCACCACCAAGCGCTTCGAGCAGGAGCTGCGGCTCGTGTCCT TGTTGTATGACTTTGGGGCTGGCCTGAAAAAGGCCGTCCCACTGCAGCCCCCACCGCCCTGACCTCGGCCAGCA AGGCGATCCAGGTGTTCCTGCTGGGGGGCAGCCGCAAGCGTGTGCTGGTGCGTGTGGAGCGGGCCACGGTGTACA GCGTGGAGCAGGACAATGATCTGGAGCTGGCCGACGCCTACTACCTGGGGGGCGTGCCGCCCGACCAGCTGCCCC CGAGCCTGCGACGGCTCTTCCCCACCGGAGGCTCAGTCCGTGGCTGCGTCAAAGGCATCAAGGCCTGGGCAAGT ATGTGGACCTCAAGCGGCTGAACACGACAGGCGTGAGCGCCGGCTGCACCGCCGACCTGCTGGTGGGGCGCCCA TGACTTTCCATGGCCACGGCTTCCTTCGCCTGGCGCTCTCGAACGTGGCACCGCTCACTGGCAACGTCTACTCCG GCTTCGGCTTCCACAGCGCCCAGGACAGTGCCCTGCTCTACTACCGGGCGTCCCCGGATGGGCTATGCCAGGTGT CCCTGCAGCAGGCCGTGTGAGCCTACAGCTCCTGAGGACTGAAGTGAAAACTCAAGCGGGCTTCGCCGATGGTG CCCCCATTACGTCGCCTTCTACAGCAATGCCACGGGAGTCTGGCTGTATGTCGATGACCAGCTCCAGCAGATGA AGCCCCACCGGGGACCACCCCCGAGCTCCAGCCGCAGCCTGAGGGGCCCCCGAGGCTCCTCCTGGGAGGCCTGC CTGAGTCTGGCACCATTTACAACTTCAGTGGCTGCATCAGCAACGTCTTCGTGCAGCGGCTCCTGGGCCCACAGC GCGTATTTGATCTGCAGCAGAACCTGGGCAGCGTCAATGTGAGCACGGGCTGTGCACCCGCCCTGCAAGCCCAGA TGCCCCCACACCTCAGGACCACCCGAGACTCCTACCAGTTTGGGGGTTCCCTGTCCAGTCACCTGGAGTTTGTGG GCATCCTGGCCCGACATAGGAACTGGCCCAGTCTCTCCATGCACGTCCTCCCGCGAAGCTCCCGAGGCCTCCTCC TCTTCACTGCCCGTCTGAGGCCCGGCAGCCCCTCCCTGGCGCTCTTCCTGAGCAATGGCCACTTCGTTGCACAGA TGGAAGGCCTCGGGACTCGGCTCCGCGCCCAGAGCCGCCAGCGCTCCCGGCCTGGCCGCTGGCACAAGGTCTCCG AGCACCAGGGGGCAGAGCACCCCAGCCCCACACCCTCTTTGTGGGCGGCCTCCCGGCCAGCAGCCACAGCTCCA AACTTCCGGTGACCGTCGGGTTCAGCGGCTGTGTGAAGAGACTGAGGCTGCACGGGAGGCCCCTGGGGGCCCCCA CACGGATGGCAGGGGTCACACCCTGCATCTTGGGCCCCCTGGAGGCGGGCCTGTTCTTCCCCAGGCAGCGGGGAG TTATCACTTTAGACCTCCCAGGAGCTACACTGCCTGATGTGGGCCTGGAACTGGAGGTGCGGCCCCTGGCAGTCA CCGGACTGATCTTCCACTTGGGCCAGGCCCGGACGCCCCCTACTTGCAGTTGCAGGTGACCGAGAAGCAAGTCC TGCTGCGGGCGGATGACGGAGCAGGGGAGTTCTCCACGTCAGTGACCCGCCCCTCAGTGCTGTGTGATGGCCAGT

6331/6881 FIGURE 5846D

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6333/6881 FIGURE 5848

 ${\tt MQNDAGEFVDLYVPRKCSASNRIIGAKDHASIQMNVAEVDKVTGRFNGQFKTYAICGAIRRMGESDDSILRLAKADGIVSKNF}$

6334/6881 FIGURE 5849

AGTGCGCCTGCGCGGAGCTCGTGGCCGCGCCTGCTCCCGCCGGGGGCTCCTTGCTCGGCCGGGCCGGGCCATGG AGACAGTGGTGTGGAGCCCCGAGGTGGAGGTGTGCCTCTTCCACGCCATGCTGGGCCACAAGCCCGTCGGTGTGA ACCGACACTTCCACATGATTTGTATTCGGGACAAGTTCAGCCAGAACATCGGGCGGCAGGTCCCATCCAAGGTCA TCTGGGACCATCTGAGCACCATGTACGACATGCAGGCGCTGCATGAGTCTGAGATTCTTCCATTCCCGAATCCAG AAGAGGAGATGAAGGAAGACGTGGACCCCCACAATGGGGCTGACGATGTTTTTTCATCTTCAGGGAGTTTGGGGA AAGCATCAGAAAAATCCAGCAAAGACAAAGAGAAGAACTCCTCAGACTTGGGGTGCAAAGAAGACGCCCAGACAAGC GGAAGCGCAGCCGGGTCACCGACAAAGTCCTGACCGCAAACAGCAACCCTTCCAGTCCCAGTGCTGCCAAGCGGC $\verb|GCCGCACG| \textbf{TAG} \verb|ACCCTCAGCCCTGGTGGCGGCAGAGAAGCGGGCGAGGCACTGTGGTCGCTGAGGGGGTTGGCTG|$ CCAGGATCGGTCCAGCTCAGATATTGAGGGCTCTGAAGCCTAGTTCTGTCTTCTCTGGAGCAGCTGTGGCTTCCC CGTGGCTGCTTGGTGACATGGATTAGCGCTACGTGGGCTGCAGCATTTGGGATCCAGGCTACCTAGAGGGGCATC GGGCCAGGGAAAACCTCGGATTAGCAAGCAATAAAAATATGACCTCACTCTTCCTCAAAGGAGCCCCTGGTCTTC TATTTTACTAGTGTTTTATATGAACAAAGTACTGCAGAAGTTAAACCTGTGTTGTATTTTTCTGAGATGTTTTG TAGTAACTTGCAAACAGACCAAATGGATGAGAGGCGGGGACCGTGCAGCTGTCGGCTGATGAGGAGGCGGCCGCC CCAGTGCTGATGGAGATGCCACTTTCGTGTGACTGCGAACATTAAAGCACAAAAAAATCC

6335/6881 FIGURE 5850

MGEAEVGGGGAAGDKGPGEAATSPAEETVVWSPEVEVCLFHAMLGHKPVGVNRHFHMICIRDKFSQNIGRQVPSK VIWDHLSTMYDMQALHESEILPFPNPERNFVLPEEIIQEVREGKVMIEEEMKEEMKEDVDPHNGADDVFSSSGSL GKASEKSSKDKEKNSSDLGCKEGADKRKRSRVTDKVLTANSNPSSPSAAKRRRT

6336/6881 FIGURE 5851

CCCGCCGCCGCGAGC<u>ATG</u>GACGACCCCGACTGCGACTCCACCTGGGAGGAGGACGAGGAGGATGCGGAGGACGC GGAGGACGAGGACTGCGAGGACGCCGAGGCCGCGAGGGACGCAGGACGCAGGGACGAGGACGAGGACTC GGAGGAGCCGCGGCCGGCCCCAGCTCGTTCCAGTCCAGAATGACAGGGTCCAGAAACTGGCGAGCCACGAG GGACATGTGTAGGTATCGGCACAACTATCCGGATCTGGTGGAACGAGACTGCAATGGGGACACGCCAAACCTGAG CTATGACCTCCTTGAGGACAATCACTCCTACATCCAGTGGCTGTTTCCTCTGCGAGAACCAGGAGTGAACTGGCA TGCCAAGCCCTCACGCTCAGGGAGGTCGAGGTGTTTAAAAGCTCCCAGGAGATCCAGGAGCCGCTTGTCCGGGC CTACGAGCTCATGCTGGGCTTCTACGGGATCCGGCTGGAGGACCGAGGCACGGGCACGGTGGGCCGAGCACAGAA CTACCAGAAGCGCTTCCAGAACCTGAACTGGCGCAGCACAACAACCTCCGCATCACACGCATCCTCAAGTCGCT GGGTGAGCTGGGCCTCGAGCACTTCCAGGCGCCGCTGGTCCGCTTCTTCCTGGAGGAGACGCTGGTGCGGCGGGA GCTGCCGGGGGTGCGCAGAGTGCCCTGGACTACTTCATGTTCGCCGTGCGCTGCCGACACCAGCGCCCCAGCT GGTGCACTTCGCCTGGAGCACTTCCGGCCCCGCTGCAAGTTCGTCTGGGGGCCCCAAGACAAGCTGCGGAGGTT GGAAGATAGGCCGGAGCCCTTAAGCCCCAAAGAGAGAAGAGGAAGCTGGAGCTGAGCCGGCGGGAGCAGCC GCCCACAGAGCCAGGCCCTCAGAGTGCCTCAGAGTGGAGAAGATCGCTCTGAATTTGGAGGGGTGTGCCCTCAG $\verb|CCAGGGCAGCCTCAGGACGGGGACCCAGGAAGTGGGCGGTCAGGACCCTGGGGAGGCAGTGCAGCCCTGCCGCCA|\\$ ACCCCTGGGAGCCAGGGTGGCCGACAAGGTGAGGAAGCGGAGGAGGTGGATGAGGGTGCTGGGGACAGTGCTGC GGTGGCCAGTGGTGGTGCCCAGACCTTGCCCGGGTCCCCTGCCCCATCGGGGCACCCCAAGGCTGGACA CAGTGAGAACGGGGTTGAGGAGGACACAGAAGGTCGAACGGGGCCCAAAGAAGGTACCCCTGGGAGCCCATCGGA GACCCCAGGCCCAGCCCAGCAGGACCTGCAGGGGACGAGCCCAGGAGAGCCCATCGGAGACCCCAGGCCCCG AGGGGACGAGCCGAGAGCCCATCGGAGACCCCAGGCCCGGCAGGACCTACAAGGGATGAGCCAGC GACCCCAGGCCCCGCCCGGCAGGACCTGCAGGGGACCAGCCGAGAGCCCATCGGAGACCCCAGGCCCAG CCCGGCAGGACCTACAAGGGATGAGCCAGCCAAGGCGGGGGGGAGCAGAGTTGCAGGACGCAGAGGTGGAGTC CTGGGGCCTCCGGAGCTGCTGCGGGCTCCCCTCAGGCTCTCGTTGACCCGTGACCCATGACCCACAGTGCTG GCCTCCTGTGGGGCCACTATAGCAGCCACCAGAAGCCGCGAGGCCCTCAGGGAAGCCCAAGGCCTGCAGAAGCCT CCTGGCCTGGCTGTGTCTTCCCCACCCAGCTCTCCCCTGCGCCCCTGTCTTTGTAAATTGACCCTTCTGGAGTGG

6337/6881 FIGURE 5852

MDDPDCDSTWEEDEEDAEDAEDEDCEDGEAAGARDADAGDEDEESEEPRAARPSSFQSRMTGSRNWRATRDMCRY RHNYPDLVERDCNGDTPNLSFYRNEIRFLPNGCFIEDILQNWTDNYDLLEDNHSYIQWLFPLREPGVNWHAKPLT LREVEVFKSSQEIQERLVRAYELMLGFYGIRLEDRGTGTVGRAQNYQKRFQNLNWRSHNNLRITRILKSLGELGL EHFQAPLVRFFLEETLVRRELPGVRQSALDYFMFAVRCRHQRRQLVHFAWEHFRPRCKFVWGPQDKLRRFKPSSL PHPLEGSRKVEEEGSPGDPDHEASTQGRTCGPEHSKGGGRVDEGPQPRSVEPQDAGPLERSQGDEAGGHGEDRPE PLSPKESKKRKLELSRREQPPTEPGPQSASEVEKIALNLEGCALSQGSLRTGTQEVGGQDPGEAVQPCRQPLGAR VADKVRKRRKVDEGAGDSAAVASGGAQTLALAGSPAPSGHPKAGHSENGVEEDTEGRTGPKEGTPGSPSETPGPS PAGPAGDEPAESPSETPGPRPAGPAGDEPAESPSETPGPRPAGPAGDEPAESPSETPGPSPAGPTRDEPAESPSE TPGPRPAGPAGDEPAESPSETPGPRPAGPAGPAGDEPAESPSETPGPSPAGPTRDEPAESPSE TPGPRPAGPAGDEPAESPSETPGPRPAGPAGPAGDEPAESPSETPGPSPAGPTRDEPAKAGEAAELQDAEVESSAKSG KP

6338/6881 FIGURE 5853

GGCAAGCCCGGCCAGGACGGCATTGACGGAGAAGCTGGTCCTCCAGGTCTGCCTGGGCCCCCGGGACCAAAGGGG GATGGACCCCTGGACCCAAGGGTGCCCCTGGGGAACGGGGAAGTCTGGGACCCCCGGGGCCGCCCGGGCTGGGG GGCAAAGGCCTCCCTGGACCCCCGGAGAGGCAGGAGTGAGCCGCCCCCAGGTGGGATCGGCCTCCGCGGCCCC CCGGGACCTCCTGGACTCCCCGGCCTCCCTGGTCCCCAGGACCTCCCGGACCCCCTGGACACCCAGGAGTTCTC CCTGAAGGCGCTACTGACCTTCAGTGCCCAAGTATCTGCCCGCCAGGTCCCCCAGGGCCCCCTGGAATGCCAGGG TTCAAGGGACCCACTGGCTACAAAGGCGAGCAGGGGGAAGTCGGCAAGGACGGCGAGAAGGGTGACCCTGGCCCC CCTGGGCCCGCCGGCCTCCCGGGCAGCGTGGGGCCTGCAGGGCCCCCGGGGATTACGAGGACTGCCAGGGCCACTC GGGCCCCTGGGGACCGGGGTCCCATTGGGTTCCGAGGGCCGCCTGGGATCCCAGGAGCGCCTGGGAAAGCGGGT GACCGAGGCGAGAGGGCCCAGAAGGGTTCCGCGGCCCCAAGGGTGACCTCGGCAGACCTGGTCCCAAGGGAACC CCCGGAGTGGCCGGGCCAAGCGGAGAGCCGGGCATGCCGGGCAAGGACGGCCAGAATGGCGTGCCAGGACTCGAT GGCCAGAAGGGAGAGGCTGGTCGCAACGGTGCTCCGGGAGAGAAGGGCCCCAACGGGCTGCCGGGCCTCCCTGGA CCAGGCGTCCCTGGAGATGCTGGCATGCCTGGGGAGCGCGGTGAGGCTGGCCACCGGGGCTCAGCGGGGCCCTC GGCCCACAAGGCCCTCCCGGAGCCCCTGGTGTCCGAGGCTTCCAGGGCCAGAAGGGCAGCATGGGAGACCCCGGC CTTCCAGGCCCCCAGGCCTCCGAGGTGACGTGGGCGACCGGGGGTCCGGGAGGTGCCGCAGGCCCTAAGGGAGAC CAGGGTATTGCAGGTTCCGACGGTCTTCCTGGGGATAAAGGAGAACTGGGTCCCAGCGGCCTGGTCGGACCCAAA GGAGAGTCTGGCAGTCGAGGGGAGCTGGGCCCCAAAGGCACCCAGGGTCCCAACGGCACCAGCGGTGTTCAGGGT GTCCCCGGGCCCCCGGTCCTCTGGGCCTGCAGGGCGTCCCGGGTGTTCCTGGCATCACGGGGAAGCCGGGAGTT CCGGGGAAGGAGCCAGCGAGCAGCGCATCAGGGAGCTGTGTGGGGGGGATGATCAGCGAACAAATTGCACAGTTA GCCGCGCACCTAAGGAAGCCTTTGGCACCCGGGTCCATTGGTCGGCCCGGTCCAGCTGGCCCCCTGGGCCCCCA GGACCCCCAGGCTCCATTGGTCACCCTGGCGCTCGAGGACCCCCTGGATACCGCGGTCCCACTGGGGAGCTGGGA GACCCCGGGCCCAGAGGAAACCAGGGTGACAGAGAGACAAAGGCCGCGCAGGACAGGGCTGGACGGGCCTGAA GGAGACCAGGGGCCCCAAGGACCCCAAGGCGTGCCCGGCACCAGCAAGGACGGCCAGGACGGTGCTCCCGGCGAG CCTGGGCCTCCCGGAGATCCTGGGCTTCCAGGTGCCATTGGGGCCCAGGGGACACCGGGGATCTGCGACACCTCA GCCTGCCAAGGAGCCGTGTTAGGAGGGGTCGGGGAGAAATCAGGCTCTCGAAGCTCATAAAATTCAACGTGAGGA AGCAAGTGACAAGGACGCCCGAAGCACAGTGGACGGTCATGAAGGAGCGGGGGTGTGGCAGGCGGGTGACGTCCA GGAGAGGGAGCCCCCTGGCTGCCCCTCGGCCGCCGACTGGACGCGGGCCTTGCCAGCGAGCACCCTCATCGG GCTGTCGCCTGACAGCATACCTCAAAAGGCCCTAGCTAATAAACCTGTAAGCCCAGCATTTGAGAGAAGGTAGGG TGTGTATATATAAAAGGTTGTGTACAACTCCACGAGGTGAAAAATATTCAGTAACTTGTTTACATAGCATTTGTG TAAAGACTATGATCTCATCCCAATAAAATGATATATTAAACCTTCAGATTAATGACTGGCTACAGAGTAACAAAA AATAAAGAATTTAATGTACAGTAAATTCTCTCCCAT

6339/6881 FIGURE 5854

MAGPRACAPLLLLLLLGELLAAAGAQRVGLPGPPGPPGPPGKPGQDGIDGEAGPPGLPGPPGPKGAPGKPGKPGE
AGLPGLPGVDGLTGRDGPPGPKGAPGERGSLGPPGPPGLGGKGLPGPPGEAGVSGPPGGIGLRGPPGPPGLPGLP
GPPGPPGPPGHPGVLPEGATDLQCPSICPPGPPGPPGMPGFKGPTGYKGEQGEVGKDGEKGDPGPPGPAGLPGSV
GLQGPRGLRGLPGPLGPPGDRGPIGFRGPPGIPGAPGKAGDRGERGPEGFRGPKGDLGRPGPKGTPGVAGPSGEP
GMPGKDGQNGVPGLDGQKGEAGRNGAPGEKGPNGLPGLPGRAGSKGEKGERGRAGELGEAGPSGEPGVPGDAGMP
GERGEAGHRGSAGALGPQGPPGAPGVRGFQGQKGSMGDPGLPGPQGLRGDVGDRGPGGAAGPKGDQGIAGSDGLP
GDKGELGPSGLVGPKGESGSRGELGPKGTQGPNGTSGVQGVPGPPGPLGLQGVPGVPGITGKPGVPGKEASEQRI
RELCGGMISEQIAQLAAHLRKPLAPGSIGRPGPAGPPGPPGPPGSIGHPGARGPPGYRGPTGELGDPGPRGNQGD
RGDKGAAGAGLDGPEGDQGPQGPQGVPGTSKDGQDGAPGEPGPPGDPGLPGAIGAQGTPGICDTSACQGAVLGGV
GEKSGSRSS

6340/6881 FIGURE 5855

TCTAGCCCCGCGCCATCTCGGTGGCCGTCCGCCCACTCCGCGGCGTTCGGGGAAATGGCTGCGAGACCCTAGAGG CCTGCGGCCTGCGGAGCTTACTCCACGGGAACAGCCTCTAGATAATCTGAGTTGTTGAAAATACGAAGCCTGTTA CTCGTGAACAGTGCTGACAACAGTGTTGTTGTGAGCCTGGCTGTCTGCATGGACCCAGAGGTTTCGTCTGCCAG GGTTTTTGGTTGTATTTAGGATTTCAGGGAAAAGTGTCCAAGCTTTCAGTGTTGGAGCAGGT**ATG**GACGACAAAG GCGACCCGAGCAATGAGGAGGCACCTAAGGCCATCAAACCCACCAGCAAAGAGTTCAGGAAAACATGGGGTTTTC GAAGGACCACTATCGCCAAGCGAGAGGGCGCAGGGGACGCGGAGGCTGACCCACTGGAGCCGCCACCCCCACAGC AGCAGCTGGGCCTGTCCCTGCGGCGCAGTGGGAGCCAAGCCCCAAGCGCACTGAGCGCGTGGAGCAGTTCCTGACCA TTGCGCGGCGCCGCGGAGGAGCATGCCTGTCTCCCTGGAGGATTCTGGTGAGCCCACGTCCTGCCCCGCCA CAGACGCCGAGACAGCCTCCGAGGGCAGCGTGGAAAGCGCTTCTGAGACCAGAAGCGGCCCCCAGTCTGCTTCCA CAGCTGTGAAGGAACGACCACCTCTTCTGAAAAGGTGAAAGGAGGGGATGACCACGATGACACCTCCGATAGTG ACAGCGATGGCCTGACCTTGAAAGAGCTTCAGAATCGCCTTCGCAGGAAGCGGGAACAGGAGCCCACTGAGAGGC CCCTGAAAGGGATCCAGAGTCGCCTGCGGAAGAAGCGCCGGGAGGAGGGTCCCGCCGAGACTGTGGGCTCCGAGG CCAGTGACACTGTGGAGGGCGTCCTGCCCAGTAAGCAGGAGCCCGAGAACGATCAGGGGGTTGTGTCCCAGGCTG GGAAAGATGACAGAGAGAGTAAGTTGGAGGGAAAGGCGGCTCAGGACATCAAAGATGAGGAGCCTGGAGACTTGG GCCGACCGAAGCCTGAATGTGAGGGTTACGACCCCAACGCCTGTATTGCATTTGCCGCCAGCCTCACAACAACA GGTTTATGATTTGCTGTGACCGCTGTGAAGAATGGTTTCATGGCGATTGTGTGGGCATTTCTGAGGCTCGAGGGA GGCTTTTGGAAAGGAATGGGGAAGACTATATCTGCCCAAACTGCACCATTCTGCAAGTGCAGGATGAGACTCATT CAGAAACGGCAGATCAGCAGGAAGCTAAATGGAGACCTGGAGATGCTGATGGCACCGATTGTACAAGTATAGGAA CAATAGAGCAGAAGTCTAGCGAAGACCAAGGGATAAAGGGTAGAATTGAGAAAGCTGCAAATCCAAGTGGCAAGA AGAAACTCAAGATCTTCCAGCCTGTGATAGAGGCGCCTGGTGCCTCAAAATGTATTGGCCCCGGGTGCTGTCACG TGGCGCAGCCCGACTCGGTGTACTGCAGTAATGACTGTATCCTCAAACACGCCGCAGCGACAATGAAGTTTCTAA GGGCGAGCGATCACAATTACAATGCAGTAAAGCCAGAAAAGACTGCTGCTCCCTCGCCGTCACTGTTGTATAAAT GACTGGGAGTTGCAGCTTTGTGT<u>TAA</u>GCTGATCACAGACACCGGCTGCACCATCAGCGGGAAGCAGAGCCCATGT CCAGGATGCCTCCTGCCCCTGTGTCCATCCCTAGTCTGTCAGGACTTCCTGTCACTGTTTTCCAAAGCTGTAA ACCTCACTGGTGAACGTTCACCTTAATGATTGATTCTTTAATCTCTGTTTTCACTCTCAGGCTCTGGTAAGTATT $\tt CGTATTCTCTTCATCCCAGTCTGATTGCATAGCCACACTGCCCGGCACGCCACATCCACCCCTGTCTGCACATGA$ GTTGTTCTGACAACAGCGCTGTATACGCTTCAGTTTTTCCACATTGTCCACGGCCAGCACATGAAAGCATCACTT CAGATAGGGGATTTTTTTTTTCCATGTCCGATTCACACGCTACACACCCACATGAACACTTCGAACTTCGAAG GCCACACTCCTGCTTCATAGGCCCCACGGTAAGTGAGTTCACACCTAGAACACTGTCCTGACCGCAGGACGCG TGCCTTGGACTTGGTATTCTACATGTGACTGGCTTTCTTGCCCTCGTCTCTTGAATGTTTAGACTCTTAAGATCA TATCCTGCCCCAAATTTCAAATTAATGAAATGAAGATATTTCAAACAGATCTTTGAAACCTCAGATTCTGTGGTG CAATTTTAATGTTTTCTTGTTTCTCAGTTTTCTGCTATAAAACTATTTTCAATTCAGTC

6341/6881 FIGURE 5856

MDDKGDPSNEEAPKAIKPTSKEFRKTWGFRRTTIAKREGAGDAEADPLEPPPPQQQLGLSLRRSGRQPKRTERVE QFLTIARRGRRSMPVSLEDSGEPTSCPATDAETASEGSVESASETRSGPQSASTAVKERPASSEKVKGGDDHDD TSDSDSDGLTLKELQNRLRRKREQEPTERPLKGIQSRLRKKRREEGPAETVGSEASDTVEGVLPSKQEPENDQGV VSQAGKDDRESKLEGKAAQDIKDEEPGDLGRPKPECEGYDPNALYCICRQPHNNRFMICCDRCEEWFHGDCVGIS EARGRLLERNGEDYICPNCTILQVQDETHSETADQQEAKWRPGDADGTDCTSIGTIEQKSSEDQGIKGRIEKAAN PSGKKKLKIFQPVIEAPGASKCIGPGCCHVAQPDSVYCSNDCILKHAAATMKFLSSGKEQKPKPKEKMKMKPEKP SLPKCGAQAGIKISSVHKRPAPEKKETTVKKAVVVPARSEALGKEAACESSTPSWASDHNYNAVKPEKTAAPSPS LLYKCMYHLGVGLLDPSRSFWIAIPWACPGLGVAALC

1

6342/6881 FIGURE 5857

GGGAGCGGGAGGCACCGGAGGCCCCCTCAGCACCTCTCGCGACAGCAAGAGAGCGCGAGAGCGCGA TACTTGCGCAGAACTCCCCTCGCGGCGACCACGCACTACGGGTTGGCGCCCAGAGTCAAAAGGCGTCGGCCCTCTG GCAAGATGGCTGCTGCGGAGGCGTTGGAGCGCGGAAATCTGGAACCGGGATGGCGACGTCTACACTGAGTCGGAG GCGAAGGAGCTTACTCCACGGGAACAGCCTCTAGATAATCTGAGTTGTTGAAAATACGAAGCCTGTTACTCGTGA ACAGTGGCTGACAACAGTGTTGTTGTGAGCCTGGCTGTCTGCTTGGACCCAGAGGTTTCGTCTGCCAGGGTTTTT GGTTGTATTTAGGATTTCAGGGAAAAGTGTCCAAGCTTTCAGTGTTGGAGCAGGTATCGACCAAAGGCGACCC GAGCAATGAGGAGGCACCTAAGGCCATCAAACCCACCAGCAAAGAGTTCAGGAAAAACATGGGGTTTTCGAAGGAC CACTATCGCCAAGCGAGAGGGCGCAGGGGACGCGGAGGCTGACCCACTGGAGCCGCCACCCCCACAGCAGCAGCT GGGCCTGTCCCTGCGCCCAGTGGGAGCCAGCCCAAGCGCACTGAGCGCGTGGAGCAGTTCCTGACCATTGCGCG CGAGACAGCCTCCGAGGCCAGCGTGGAAAGCGCTTCTGAGACCAGAAGCGGCCCCCAGTCTGCTTCCACAGCTGT GAAGGAACGACCAGCCTCTTCTGAAAAGGTGAAAGGAGGGGGATGACCACGATGACACCTCCGATAGTGACAGCGA TGGCCTGACCTTGAAAGAGCTTCAGAATCGCCTTCGCAGGAAGCGGGAACAGGAGCCCACTGAGAGGCCCCTGAA AGGGATCCAGAGTCGCCTGCGGAAGAAGCGCCGGGAGGGGGCTCCCGCCGAGACTGTGGGCTCCGAGGCCAGTGA CACTGTGGAGGGCGTCCTGCCCAGTAAGCAGGAGCCCGAGAACGATCAGGGGGTTGTGTCCCAGGCTGGGAAAGA TGACAGAGAGAGTAAGTTGGAGGGAAAGGCGGCTCAGGACATCAAAGATGAGGAGCCTGGAGACTTGGGCCGACC GAAGCCTGAATGTGAGGGTTACGACCCCAACGCCCTGTATTGCATTTGCCGCCAGCCTCACAACAACAGGTTTAT GGAAAGGAATGGGGAAGACTATATCTGCCCAAACTGCACCATTCTGCAAGTGCAGGATGAGACTCATTCAGAAAC GGCAGATCAGCAGGAAGCTAAATGGAGACCTGGAGATGCTGATGGCACCGATTGTACAAGTATAGGAACAATAGA GCAGAAGTCTAGCGAAGACCAAGGGATAAAGGGTAGAATTGAGAAAGCTGCAAATCCAAGTGGCAAGAAAACT CAAGATCTTCCAGCCTGTGATAGAGGCGCCTGGTGCCTCAAAATGTATTGGCCCCGGGTGCTGTCACGTGGCGCA GCCCGACTCGGTGTACTGCAGTAATGACTGTATCCTCAAACACGCCGCAGCGACAATGAAGTTTCTAAGCTCAGG TAAAGAACAGAAGCCAAAGCCTAAAGAAAAGATGAAGATGAAGCCAGAGAAGCCCAGTCTTCCGAAATGCGGTGC AGTTGCAGCTTTGTGTTAAGCTGATCACAGACACCGGCTGCACCATCAGCGGGAAGCAGAGCCCATGTCCAGGAT GCCTCCTGCTGCCCTGTGTCCATCCCTAGTCTGTCAGGACTTCCTGTCACTGTTTTCCAAAGCTGTAAACCTCAC TGGTGAACGTTCACCTTAATGATTGATTCTTTAATCTCTGTTTTCACTCTCAGGCTCTGGTAAGTATTCGTATTC TCTTCATCCCAGTCTGATTGCATAGCCACACTGCCCGGCACGCCACATCCACCCCTGTCTGCACATGAGTTGTTC TGACAACAGCGCTGTATACGCTTCAGTTTTTCCACATTGTCCACGGCCAGCACATGAAAGCATCACTTCTTTTTT GGGATTTTTTTTTCCATGTCCGATTCACACGCTACACACCCACATGAACACTTCGAACTTCGAAGGCCACAC ACTCCTGCTTCATAGGCCCCACGGTAAGTGAGTTCACACCTAGAACACTGTCCTGACCGCAGGACGCGTGCCTTG GACTTGGTATTCTACATGTGACTGGCTTTCTTGCCCTCGTCTCTTGAATGTTTAGACTCTTAAGATCATATCCTG CCCCAAATTTCAAATTAATGAAATGAAGATATTTCAAACAGATCTTTGAAACCTCAGATTCTGTGGTGCAATTTT AATGTTTTCTTGTTTCTCAGTTTTCTGCTATAAAACTATTTTCAATTCAGTC

6343/6881 FIGURE 5858

MDDKGDPSNEEAPKAIKPTSKEFRKTWGFRRTTIAKREGAGDAEADPLEPPPPQQQLGLSLRRSGRQPKRTERVE QFLTIARRGRRSMPVSLEDSGEPTSCPATDAETASEGSVESASETRSGPQSASTAVKERPASSEKVKGGDDHDD TSDSDSDGLTLKELQNRLRRKREQEPTERPLKGIQSRLRKKRREEGPAETVGSEASDTVEGVLPSKQEPENDQGV VSQAGKDDRESKLEGKAAQDIKDEEPGDLGRPKPECEGYDPNALYCICRQPHNNRFMICCDRCEEWFHGDCVGIS EARGRLLERNGEDYICPNCTILQVQDETHSETADQQEAKWRPGDADGTDCTSIGTIEQKSSEDQGIKGRIEKAAN PSGKKKLKIFQPVIEAPGASKCIGPGCCHVAQPDSVYCSNDCILKHAAATMKFLSSGKEQKPKPKEKMKMKPEKP SLPKCGAQAGIKISSVHKRPAPEKKETTVKKAVVVPARSEALGKEAACESSTPSWASDHNYNAVKPEKTAAPSPS LLYKCMYHLGVGLLDPSRSFWIAIPWACPGLGVAALC

6344/6881 FIGURE 5859

GGAGCTTACTCCACGGGAACAGCCTCTAGATAATCTGAGTTGTTGAAAAATACGAAGCCTGTTACTCGTGAACAGT GGCTGACAACAGTGTTGTTGAGCCTGGCTGTCTGCTTGGACCCAGAGGTTTCGTCTGCCAGGGTTTTTGGTTG TATTTAGGATTTCAGGGAAAAGTGTCCAAGCTTTCAGTGTTGGAGCAGGT<u>ATG</u>GACGACAAAGGCGACCCGAGCA ATGAGGAGGCACCTAAGGCCATCAAACCCACCAGCAAAGAGTTCAGGAAAACATGGGGTTTTCGAAGGACCACTA TCGCCAAGCGAGAGGGCGCAGGGGACGCGGAGGCTGACCCACTGGAGCCGCCACCCCCACAGCAGCAGCTGGGCC TGTCCCTGCGGCGCAGTGGGAGCCAGCCCCAAGCGCACTGAGCGGTGGAGCAGTTCCTGACCATTGCGCGGCGCCC GCGGCAGGAGGAGCATGCCTGTCTCCCTGGAGGATTCTGGTGAGCCCACGTCCTGCCCCGCCACAGACGCCGAGA CAGCCTCCGAGGGCAGCGTGGAAAGCGCTTCTGAGACCAGAAGCGGCCCCCAGTCTGCTTCCACAGCTGTGAAGG AACGACCAGCCTCTTCTGAAAAGGTGAAAGGAGGGGATGACCACGATGACACCTCCGATAGTGACAGCGATGGCC TGACCTTGAAAGACTTCAGAATCGCCTTCGCAGGAAGCGGGAACAGGAGCCCCACTGAGAGGGCCCCTGAAAGGGA TCCAGAGTCGCCTGCGGAAGAAGCGCCGGGAGGGGGCTCCGCGAGACTGTGGGCTCCGAGGCCAGTGACACTG TGGAGGGCGTCCTGCCCAGTAAGCAGGAGCCCGAGAACGATCAGGGGGTTGTGTCCCCAGGCTGGGAAAGATGACA CTGAATGTGAGGGTTACGACCCCAACGCCTGTATTGCATTTGCCGCCAGCCTCACAACAACAGGTTTATGATTT GGAATGGGGAAGACTATATCTGCCCAAACTGCACCATTCTGCAAGTGCAGGATGAGACTCATTCAGAAACGGCAG ATCAGCAGGAAGCTAAATGGAGACCTGGAGATGCTGATGGCACCGATTGTACAAGTATAGGAACAATAGAGCAGA AGTCTAGCGAAGACCAAGGGATAAAGGGTAGAATTGAGAAAGCTGCAAATCCAAGTGGCAAGAAGAAACTCAAGA TCTTCCAGCCTGTGATAGAGGCGCCTGGTGCCTCAAAATGTATTGGCCCCGGGTGCTGTCACGTGGCGCAGCCCG ACTCGGTGTACTGCAGTAATGACTGTATCCTCAAACACGCCGCAGCGACAATGAAGTTTCTAAGCTCAGGTAAAG AACAGAAGCCAAAGCCTAAAGAAAAGATGAAGATGAAGCCCAGAGAAGCCCAGTCTTCCGAAATGCGGTGCTCAGG TGGTCCCTGCGCGGAGTGAAGCACTCGGGAAGGAAGCAGCTTGTGAGAGCAGCACCGCCGTCGTGGCCGAGCGATC ACAATTACAATGCAGTAAAGCCAGAAAAGACTGCTGCTCCCTCGCCGTCACTGTTGTATAAATGCTCTGGTAAGT ATTCGTATTCTCTTCATCCCAGTCTGATTGCATAGCCACACTGCCCGGCACGCCACATCCACCCCTGTCTGCACA TGAGTTGTTCTGACAACAGCGCTGTATACGCTTCAGTTTTTCCACATTGTCCACGGCCAGCACATGAAAGCATCA GGGCAGATAGGGGATTTTTTTTTTCCATGTCCGATTCACACGCTACACACCCCACATGAACACTTCGAACTTCG AAGGCCACACACTCCTGCTTCATAGGCCCCACGGTAAGTGAGTTCACACCTAGAACACTGTCCTGACCGCAGGAC GCGTGCCTTGGACTTGGTATTCTACATGTGACTGGCTTTCTTGCCCTCGTCTCTTGAATGTTTAGACTCTTAAGA TCATATCCTGCCCCAAATTTCAAATTAATGAAATGAAGATATTTCAAACAGATCTTTGAAACCTCAGATTCTGTG GTGCAATTTTAATGTTTTCTTGTTTCTCAGTTTTCTGCTATAAAACTATTTTCAATTCAGTC

6345/6881 FIGURE 5860

MDDKGDPSNEEAPKAIKPTSKEFRKTWGFRRTTIAKREGAGDAEADPLEPPPPQQQLGLSLRRSGRQPKRTERVE QFLTIARRGRRSMPVSLEDSGEPTSCPATDAETASEGSVESASETRSGPQSASTAVKERPASSEKVKGGDDHDD TSDSDSDGLTLKELQNRLRRKREQEPTERPLKGIQSRLRKKRREEGPAETVGSEASDTVEGVLPSKQEPENDQGV VSQAGKDDRESKLEGKAAQDIKDEEPGDLGRPKPECEGYDPNALYCICRQPHNNRFMICCDRCEEWFHGDCVGIS EARGRLLERNGEDYICPNCTILQVQDETHSETADQQEAKWRPGDADGTDCTSIGTIEQKSSEDQGIKGRIEKAAN PSGKKKLKIFQPVIEAPGASKCIGPGCCHVAQPDSVYCSNDCILKHAAATMKFLSSGKEQKPKPKEKMKMKPEKP SLPKCGAQAGIKISSVHKRPAPEKKETTVKKAVVVPARSEALGKEAACESSTPSWASDHNYNAVKPEKTAAPSPS LLYKCSGKYSYSLHPSLIA

6346/6881 FIGURE 5861

GGAAGCTGGTGGCGGCTGGTGGGCGACCGGGCGCATCCTCATTGCAGTGCGGCGCCCTACCTCGGCCCTGGCCT GACCCCGGCGGCCCTGCCCGCCCTCCCTCCAGCATCATCGCCCAAGAACCAGGAAGGTTCTTAAAGAAGT ${\tt CAGGGTGCAGGATGAGAACATCGTTTGTTTTGAGTGTGGCGCGTTCAATCCTCAGTGGGTCAGTGTGACCTACGG}$ CATCTGGATCTGCCTGGAGTGCTCGGGGAGACACCGCGGGCTTGGGGTTCACCTCAGCTTTGTGCGCTCTGTTAC TATGGACAAGTGGAAGGACATTGAGCTTGAGAAGATGAAAGCTGGTGGGAATGCTAAGTTCCGAGAGTTCCTGGA GTCTCAGGAGGATTACGATCCTTGCTGGTCCTTGCAGGAGAGTACAACAGCAGAGCCGCGCCCTCTTTAGGGA TAAGGTGGTCGCTCTGGCCGAAGGCAGAGGTGGTCTCTGGAGTCATCACCTGCCCAGAACTGGACCCCACCTCA GCCCAGGACGCTGCCGTCCATGGTGCACCGAGTCTCTGGCCAGCCGCAGAGTGTGACCGCCTCCTCGGACAAGGC TTTTGAGGACTGGCTGAATGATGACCTCGGCTCCTATCAAGGGGCCCAGGGGAATCGCTACGTGGGGTTTGGGAA CACGCCACCGCCTCAGAAGAAGAAGATGACTTCCTCAACAACGCCATGTCCTCCCTGTACTCGGGCTGGAGCAG CTTCACCACTGGAGCCAGCCGGTTTGCCTCGGCAGCCAAGGAGGGCGCTACAAAGTTTGGATCCCAAGCGAGTCA GAAGGCGTCCGAGCTGGGCCACAGCCTGAACGAGAACGTCCTCAAGCCTGCGCAGGAGAAGGTGAAGGAGGGAAA GATTTTGATGATGTCTCCAGTGGGGTCTCTCAGTTGGCGTCCAAGGTCCAGGGAGTCGGTAGTAAGGGATGGCG GGACGTCACCACCTTTTTTCGGGGAAAGCAGAGGGCCCCTTGGACAGCCCCTCGGAGGGCCACAGTTATCAGAA CAGCGGTCTGGACCACTTCCAAAACAGCAACATAGACCAGAGCTTCTGGGAGACCTTTGGAAGTGCTGAGCCCAC CAAGACCCGCAAGTCCCCGAGCAGCAGCTGGACGTGCGCGGACACCTCCACCGAGAGGAGGAGCTCGGACAG TCAGCAACTGCAGTGTGAGGACAGCGTCTCGGGAGGCCGGGAGACCCTAGGGAGACCCGGGTGTGCGCCCTGCGCG TGGGGAGTCTTCGGTGCGTGGGGGCGCTTGCTGTCCAGCCTGTGTGGGGGGCCGTCCCGTCCCACACTCCCCTGG GCATTCTTGGACTCAAGGCCGGGGCTCTGCGTGGCTTGCTGGGAGGTGGGCTGCAGCACAGAGGCCTGTGACTGC GTTCCAGCGGCCAGTTCACTACGCAGTATCTCTGGGGCCTGGGACCACGTGCCGAGCTGTCAGCGACGTGA GTAAAGATGGAAATGCTGGAAATGATACTGGCGCTCACGCTGCCATCCGACCACCCTCGGCTCCCGAGTCCACGC CTGCCTGGGCCTGTCCAGACCCGCGTCGTCAACCCTCTGTGGCTCCCTGCATCAGCACCGTCCCACC ACCAAGTTCACCAGGTTCACCAGACACGGCCTCCACAATAGCCACACCCCACACCTGAGCTGTCCTCAGTGCTGGA ACTTGACCATCCTGGAACACCCTGGAAGAAAAAGGAGCGCAGGGTGGGCCCTCGGCCCTGATGCAGGAGGGTGCG TAGGGAAGCTCCAGCCCCAGGATGGGGCTGCCCTGCACACCGGTGCCCGCACATGCCAACCCTCACCTCCCGA TGCATGCGCCCGAAGCTCGTGCAGTTTGTACGTGAGGTGCTCTCCTCCCTGCCACCATGCTCATCACTCTGGCCT TGGCCATGCTCCCTGGTCACCCCACTTCCCGGTCGCCGTCTGCAGCACTCCTGGAGCAGCCTGGGCCCTTCAGCC CCTGTGCTCGTCCCACCCTAGGGACTCAGTCACTTGCAGAACAGGATGGGACCGAGATTTCAGCGAGCCCTCCTG GCGCCCGGTCCTCCTGTGGGCACCAGCCCTCTTGGTAGCTGGTGTGGAGGGCCGGTGTCCTTGGCTGCCACGGA GGGATTTGATCACCGAAGCAGCCACCTGCTGTAGTTGGACCTGAGGTCAGAGGCGGGGCATCAGAGGCTCAAGGT GCTGAGAAGCCACCGGGAAAGCAGCCAGCACAAAGGGCCCAGGAAGCCAGCCCCCGAGAGCTGAGCGTGGGGGTC TTTGAGTGTCTTTCTCCAAGCTGAGACGTGGGCGGCCGCGTGGTATCTCCCGAGGGCTGCTTGGACCCTGGTGGG CTGAGTGCTCCGAGGAGGGGTGGACTCCACCTTGGACAGTGGGATGTGGTGTTCCACATGTGCCTGTTTCCACGC CAGCACCTTGACTTGGCAGCATGGAGCCAAGGTCTGTCCCCGCCCAGGAGGGTGCCTTCCTCGGGGGTAGGGGGA CGGCCCACTCTGCCCCAGGGAGTCCCTTTTGATGGGAAGTGCAGTCAGCAGCGTGGAGGTGTCTGGGCCACCTTC AGAAGGTGGATGTGGTGGCCGAGACCCCGTCCACGGAGGGTGATGGCCTTTCCCTTCTGCAGGTGCGGCCAGGTG GGCCTGGGACCGGTGCTGGGGCCTCTCCTTGCTGTGTGAGGGCCCAGGTGGAAGGCGCGGACCTGACAGCATT CCAATAAAGCATACGGGAACATG

6347/6881 FIGURE 5862

MASPRTRKVLKEVRVQDENNVCFECGAFNPQWVSVTYGIWICLECSGRHRGLGVHLSFVRSVTMDKWKDIELEKM KAGGNAKFREFLESQEDYDPCWSLQEKYNSRAAALFRDKVVALAEGREWSLESSPAQNWTPPQPRTLPSMVHRVS GQPQSVTASSDKAFEDWLNDDLGSYQGAQGNRYVGFGNTPPPQKKEDDFLNNAMSSLYSGWSSFTTGASRFASAA KEGATKFGSQASQKASELGHSLNENVLKPAQEKVKEGKIFDDVSSGVSQLASKVQGVGSKGWRDVTTFFSGKAEG PLDSPSEGHSYQNSGLDHFQNSNIDQSFWETFGSAEPTKTRKSPSSDSWTCADTSTERRSSDSWEVWGSASTNRN SNSDGGEGGEGTKKAVPPAVPTDDGWDNQNW

6348/6881 FIGURE 5863A

CCGTGCCTGCTGACATGGTCTTCCTGGTGGACGGTCCTGGAGCATTGGCCACAGTCACTTCCAGCAGGTCAAGG ACTTCCTGGCCAGTGTCATCGCACCCTTTGAAATCGGGCCGGATAAGGTCCAAGTAGGCCTGACTCAGTACAGCG GCTACAAGGGGGGAACACGTTCACAGGCCTTGCCCTGACCCACGTGCTGGGGCAGAACCTGCAGCCGGCGGCTG CCCGTGTCCTCAAGGACCTGGGCGTGAACGTCTTCGCTGTGGGTGTGAAGAACGCCGATGAGGCTGAGCC TGCTCAGCCGTCTCATCTGCCAGAGGCTCCAGGGTGGGAGCCCGCGGCAGGGCCCAGCAGCGCTCCAGCCCTGG ACACCCTCCCTGCCCCACCAGCCTGGTCCTGAGCCAGGTGACCTCCTCCAGCATCCGCCTGTCCTGGACTCCAG CCCCCGGCACCCCTCAAGTATCTGATCGTTTGGCGAGCCTCTAGAGGTGGCACCCCCAGGGAGGTGGTGGT AGGGACCCGCCCCCCCACGGAGCTGCACAACCTGGCCTCCCGCACAGAGTACCTGGTCTCCCGTGTTCCCCATCT ATGAGGGCGGGGTTGGCGAAGGCCTGCGGGGCCTGGTGACCACACCCTCTGCCTCCGCCCCGGGCGCTGACCC GTTCTCCTGCTTCCCCCAAGGGTGAAGAGGAGGAGCGAGGTGCAGGTCGGGCGCCCGAGGTGCTGCAGGTG GCCTGGAACCTGGCAGGGACTATGAGGTCTCGGTGCAGAGCCTGCGAGGCCCTGAGGGCAGCGAGGCCCGGGGCA TCCGTGCCAGGACCCCCACCCTGGCCCCCCGAGACACCTGGGCTTCTCAGACGTGAGCCACGACGCGGCACGAG TGTTCTGGGAGGGTGCCCCGAGGCCTGTGCGCCTGGTCAGGGTCACCTATGTGTCCAGCGAGGGTGGACACTCGG GTGTCACCTGCCTCTACCCTGGGGGTGGCTCCTCTACGCTGACTGGCCGGGTGACCACCAAGAAAGCTCCCAGCC $\tt TGCTTGTCTACCAGATCACGTGGACGCCCCTGGGAGAGGGGAAGGCTCACGAGATCTCTGTCCCAGGGAACCTCG$ GCACGGCCGTCCTGCCTGGCCTAGGGAGGCACACAGAGTACGACGTCACCATCTTGGCCTACTACAGGGACGGG CCCGCAGTGACCCTGTGTCCCTCCGCTATACCCCCTCCACGGTGAGCAGGAGCCCACCCTCCAACCTGGCCCTGG $\tt CCTCGGAGACCCCCGACAGCCTGCAGGTCAGCTGGACGCCCCCGCTTGGCCGCGTGCTCCATTACTGGCTCACCT$ ACGCCCCGCCTCTGGCTTGGGACCCGAGAAATCCGTCTCTGTGCCAGGAGCCAGGAGCCACGTGACACTGCCCG GCCTGGTGGAAAAGGCTTATGCGTCCATCCGGGGCGTGGCCATGGAGCCCTCTGCCTTCGGTGGGACCCCGACCT TCACGCTCTTCAAGGACGCCCAGCTGACAAGACGGGTCAGTGACGTCTACCCAGCCCCCCTACCTCCAGAGCACA CCATCGTCTTCCTTGTGCGCCTACTTCCCGAGACACCCCGTGAGGCCTTCGCGCTGTGGCAGATGACAGCCGAGG ACTTCCAGCCCTCCTTGGGGTTCTGCTGGATGCCGGGAAGAAGTCCCTGACCTACTTCCACCGTGACCCCAGGG CTGCCTTGCAGGAGGCCACCTTCGACCCGCAGGAAGTGAGGAAGATTTTCTTCGGGAGCTTCCACAAGGTGCACG TGGCTGTGGGCCGCTCCAAGGTCAGGCTCTATGTGGACTGCCGGAAGGTGGCTGAGCGGCCCCTTGGGGAAGATGG GCAGCCCACCGCTGCGGGCTTCGTCACGCTGGGGAGGCTGGCCAAGGCCAGGGGCCCCCGGAGCAGTTCGGCCG CGTTTCAGCTCCAGATGCTGCAGATCGTGTGCAGTGACACCTGGGCCGATGAGGACCGGTGCTGTGAGCTCCCTG CCTCGAGGGATGGAGACCTGCCCCGCCTTCGTGTCTGCCTGTTCCTGTTCCTCAGAGACCCCTGGGCCCCCAG GACCTCAAGGACCCCCAGGCCTCCCTGGGAGGAATGGCACCCCAGGAGAGCAGGGCTTCCCAGGGCCCAGGGGTC CACCAGGGGTCAAAGGAGAGAGGGAGACCATGGGCTTCCAGGCTTGCAGGGCCACCCCGGCCACCAGGGCATCC CCGGGAGAGTTGGCCTCCAGGGACCAAAGGGAATGAGAGGCCTGGAGGGAACTGCTGGCCTGCACCCCTGG CCCCAGGGGGTTCCAGGGCATGGCAGGGGCCAGGGGCACTAGTGGAGAGCGAGGACCTCCAGGGACCGTGGGGCC CACAGGACTGCCAGGGCCCAAAGGGGAACGAGGAGAGAAGGGCCGCAGTCCCTTGCCACCCTCTACCAGCT TGTGAGCCAGGCCTGTGAGTCTGCCATTCAGACACACGTGTCAAAGTTCGACTCCTTCCACGAGAACACCAGGCC CCCCATGCCCATCTTGGAGCAGAAGCTGGAGCCGGGCACTGAGCCCCTGGGGTCCCCTGGCACCCGCAGCAAGGC CCTGGTTCCTGGAGAATGGGGGGTGGTGGCCGCCACCTTGAGGGCAGAGGGGAGCCTGGAGCTGTTGGTCAGAT GGGCAGCCCTGGGCAGCAGGGGGCTAGCACCCAGGGCCTCTGGGAGTGACAGGACATTTTCTGCACTGCCCCGAG GAACGCTGAGCCTTCCTCCCTGGGTTTGTCTGGACACCGAGAGCGACCACCTCCTGGAGAAGCCAGGAGAAAAGC TCAGGAAGAGCCTGCAGGTGGAAGGAGGGAAGCAGCCGCCTCGGCCAAGGCCCACCCCATACTCTTGGCTCTG

6349/6881 FIGURE 5863B

TAGCATTTCCAAGTTCAGATAAACCCCTGAGTGCTCACCCAGCCAAGCGAGGCGGGAGTCATTTCCTGGGAGAGT GTCCCCACCTGGCTCTGTGCACCCCACCTTGAGGCCCTGCAGCTTCAGCCGCAGTGGGGAAGGGGAGGGGCTG GGCTGATGGCGAATCGGGTTCAGGAGGGCAGCAGTGCCCTGTGGCCGTCTCAGTAGCTCTAAAACAGGCTCAACA ACATGCCCGCCCCTTTCTCTGGGCCTCATCTAAGCCTGGCCAGGGCCCTGTGGGGCCCGCCTCTCTGTGCGCCTC CCAAGAAGGAGTTCAGATCCTGTGTGTGAATGGCCACCCCTCACCCAGCCCTGTGCTGAGTTCCTTGTGCA GGGACATTGCTTTGAGACTTGGCACCATCAGCCCCTGGTCCTTAGGGTCTCAGAGCAAGGTCATCCCTCAGCAGG CTTCTGGCCTGTGCGCTCCTCAGCACCTCTGCCCAGGTCTCTCCCAACCATCACAGACGCTGTGTGAGCCTGGAC TTCCTGCCTTATCCCCACTGTGGCCCAAACAGCATGGGGGCAAGCTCAGAACACACCTGGGCTTCTGGGCCTT CTTAGGCAGCTAAGCAAGAAAGGTGCCAGAAATGAAGAGGGAAGCCATATCATTGAGGAGAGAATGAAAAGTATT AAAAAGGAACAAAGAGACCCTTGATATTGACAGAAGGAAAACCCACCAAGATCACCAGTGCAGCATTGCGTGC ACCAAAGCATACCCCAAAGAGGTGAGCGCAAAACAGCTTCAGGGCAAACACTTCATCTATGATTCAACTGTTCCA GGAACTGACCAGACCTGGAGACCAAATAGAGAGTCATAGGCAGGGTCAGCAGGATGGGAGAGAGCGCCTGCACCC ACAGGAGCCACAGCCCTGACTGAGGCCAGGAAGCAGCCCCAAATGCCAGCTCCCACTGCAGCATGAGAACAGAAA CAGACCACTGAAAATTCCCAAAGTCTGTGGACAAATCAGACGTCGAAGAAGTCACGTGGCATCGAGACAGATTTT GCACTGAGGGACAAGGAGCATGTGGCCAAAGTAGGTGCAGGTAAAGCAGCATCTGGGGCAGAGTTATAGCCTT ${\tt CAGTGCAGGTATCAGACAGTTGTTGAGAGCAGCCAGCCCAGCCCCTCCGTCCTGCAGGGAGGACACCTA}$ GGTCACTTGGCTTCTGTTGGGGAGCTGAGTTGCTTCAGATTGTGTGACCAGCAAAACAGCTTGGTTGCTCTCACT TTTGTCATGAGGCAGGAGTGGGGCTAGAATCAAGCCCAGAGCCCACAGGGCATCCAGAGCCTTCCAAAGGAGCCC CTCTCCTGGGGCTCTCCAATTTGATGAAGGGACTGGGCACTGGGTGGCTGAGACCACATTGGCAGCCAGGAGGAG GCAGCCTGGCCGGGGGAACCAGGGTGGCTCTAATCCCCACCACCCCTCAGCTGCCCTACCCCCGCCACGCTGG TGTGACACCAGTGATGCTCAGCCTCAAAAGGGGAGTCCGGCTGTCTTCGGGAAACTGACTTTATGCTGGAGGCCA ATTAAAATGGCACAGCAAAGGCAGCGGCCAGCTGGTGCCCAGGCAGCTTAGGGACTGGTCCCTGAGGCCCCACCC GCCCCAGCCTGTGCAGTGGAGCTGAGTACGAATCAAAGGTGAGGATGGCAAGGGAGCTGAGAGCAGCCTCCGGAT GCACCAAACCGGCCTGGCTCCTGTTTGCAGGAAGGCAGCCTCCCCGAGACCCAGCCGACCTGCACGTCTCCCATC AGCCCCGACTCCACCGCATCCCTCTGGGTCCTTTTAGGAGCCCCCAGGGACTGAGCCGGGGCTCACGCTCCTGGC CAGAGCGCTGGGTTTCTGGCAATGCCTCCCCTCCTGCCTTTACGGCCACAGCTCTCCCCTCCAGAGGCCCCTCTG TAGTGGGCCTCGGTCCCCTCTCCACCCCCAGAGGCAGCACAGCTTCAGCCCTACGCAGTGTGGGGGCTCCGGGAG GAAATGCAGGGAGGTGCTTGGTCTTGGCCCAGAGCTCATGGCCTTAGGTGCTGCCCCAGTCACCCCCGTGCCCA TGCAGCCGGGGATGTTCAGCTCAGGCCAGCCACCGAGGTGGTGTGACGCAAGGCTGATCTGACGCTCAGCTCAGG CCGCTGGGGTCATGGGGGTTGTGGGAAGGTCATGGAATCACGGGGGCTCACGCTGGGGTCACAGGGTGGTGTGGCT TCTGCCTGAGGCCCCAAGAGCGACCTTGGAAGCTCCAGGCCTTCACAGCCCCTCTGAGAGCCACCTGCAAGGTGG AGGCCTGGGAGGAATGTGTAGCAGGAGGCAGGGGGGTGCTGTCCCCCCAGGACCAGCAGGTGAGGCGTGTCCACCC ACAGAGGATGCTCTGGCCCAGGCAGTGTCAGAAATGGAAGCTGAGGAAACCCAACCCCAGCTGTAGAGGAGCCT GCCCCGATGCCATCTGCACCTGGGGGGCGACGTATGGCTGCCAGCCTCTTCATCTACCAAGGACCAGGGCAGTGG GGACGGGAGAGCTGGGACACGTGGACTCACACCAGGGCAGATGGTGGGGGGAAGCCAGTGTCTGTAGATTCAGTGC ATTTCTTGGGGAAGGCGTGGAACATTTGGACTTGAGCCCCAGCACAGAGACGATGTCATAATACAGCCCCCCAT CGTGATCTGATGGTAAGTACAGAACTCCTTGCCCAGTGGAGAAACACTCTCCTCTCATGTGTGGAATATCCACAC TGAAAACTGGAAAAACAACCAATGATAACAAGCTAAAGAATGCCTCTAGAAGCTAAAAGACACACCCATGACTCCA ${\tt CGTCAGAATCTCTGTGCTGCAGCTGCAGTGGTACCTAGAGGGCAATTTATAGCTGTAAATACAGTGCTTTGTTTT}$ GTTTTCTTGTTTTTTGAGACAAGGTCTTGCTCTGTCACCCAGGCTGGAGTACAGTGGCATGATCTCGGCTCAATG

6350/6881 FIGURE 5863C

MVAFSLVEKAYASIRGVAMEPSAFGGTPTFTLFKDAQLTRRVSDVYPAPLPPEHTIVFLVRLLPETPREAFALWQ MTAEDFQPLLGVLLDAGKKSLTYFHRDPRAALQEATFDPQEVRKIFFGSFHKVHVAVGRSKVRLYVDCRKVAERP LGEMGSPPAAGFVTLGRLAKARGPRSSSAAFQLQMLQIVCSDTWADEDRCCELPASRDGETCPAFVSACSCSSET PGPPGPQGPPGVKGEKGDHGLPGLQGHPGHQGIPGRVGLQGPKGMRGLEGTAGLPGPLAPGGSRAWQGPGAL VESEDLQGPWGPQDCQGPKGNEERRASRSPLPPSTSL

 ${\tt MAAIPSSGSLVATHDYYRRLGSTSSNSSCSSTECPGEAIPHPPGLPKADPGHWWASFFFGKSTLPFMATVLESAEHSEPPQASSSMTACGLARDAPRKQPGGQSSTASAGPPS}$

PCT/US2003/028547

6354/6881 FIGURE 5867A

WO 2004/030615

TGCTCACCTCTGACAGCCAGACAAGGGCTGTGCTCAGGGGCAGCTCGGCTGGGCACACAGTAGGTGCTTTAGCGG ${\tt ACAGCACTGAGGCCCCAGCAAGAAGCCC} \underline{{\tt ATG}} {\tt AGCTCCTCCCCCTCCCGCAGTGCCGCAGACATCTACATCCGGG}$ GGGCAGAGCTGGCGCGCACCGCGTGGTCACCACCACCTCCCAGGCCCGTGAGCTCAGGGTGCCGGTCGGCT TCTTCTCCCACATTCTCATCGATGAGGCCGCCCAGATGCTGGAGTGCGAGGCCCTCACCCCGCTGGCCTATGCCT GGGCGGCCGAGCACACGCTGCTGCACCGCCTCTTCCTGTGCTACCAGCAGAGACTCACGAGGTGGCGCGCAGA TGGCGGGCAGCCCAGACCGGGACATGTCCATGGCGTCCTGGCTGAATCTGGCTGAGATTGCGCAGGTCGTCGAGA AGGTGCAGGAGGCCTACAACACCTGGCCCAGCTGCTGGGGCGGCCGCGAGCAGAGGTGCATCTGTGTCGTTTCCC AGATCCTGCCAGGGCGGCAGTTCCGGGTCGTGGTGCTCAGCACTGTGCACACCTGCCAGAGCCTGCTCAGCCCTG GGGCACTGGCCCCTGAGTTCTTCACCGACGCCCGCGTGCTCAACACCGTCCTGACCCGCGCCCAGTCCCAGCTGG TGGTAGTGGGGGACGCCGTGGCCCTCTGCTCCTTCGGGGGCCTGCGGCAAGCTCTGGGAGAGCTTCATCCGTGAGT GCGTGGAGCGGCACAGTGTCTGCCCCGAGGGCCTGTCCATGGAGCAGGTCGAGCAGGGTGTGGCGCAGAGACGGC CCGAGGAGCAGGCGGCTGTGGTGACGGCCATGGTGAAGGCAGAGCCGGGAGATGAGGCTCTGAGCCCAGCATCCC TGCCCGGGGCCTGTGCGGCAGGAGCGGCTGCAGCGGGCGTGGAGTCCACGGAGGCTGAGGATGCAGAGGCTG ACTTCTGGCCGTGGGACGGGAGCTCAACGCTGACGACGCCATCCTACGGGAGCTTCTGGACGAGAGCCAGAAGG TGATGGTGACCGTCGGGGAGGACGGCTGCTGGACACTGTCGCCAGGCCCGAGTCCCTGCAGCAGGCCCGGCTGT ACGAGAACCTGCCCCGGCTGCGCTACGGAAGCTGCTGCACGCGGAGCCCGAGCGGTACCGCCACTGCTCTTTCG TGCCAGAGACCTTCGAGCGGGCGTCAGCCATCCCGCTGGACGATGCCTCCTCGGGCCCCATCCAGGTCAGGGGCC GCCTGGACTGTGGGATGGCCTTCGCCGGGGATGAGGTGCTGGTGCAGCTCCTTTCGGGAGACAAGGCGCCCGAGG GGCGGCTTCGGGGCCGCGTGCTGGACGAGGGAAGAGGCACGAGCTGGCGTTTGTGTGCCGCATGGACA ${\tt CGTGGGACCCGCGCATCATGGTCCCCATCAATGGCTCCGTGACCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGGCTCGTGACCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGGCTCGTGACCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGGCTCGTGACCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGGCTCGTGACCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGGCTCGTGACCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGGCTCGTGACCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGGCTCGACCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGGCTCGACCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGATCATGGCTCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGATCATGGCTCAAGATCTTCGTGGCCGAGCTGAAGGACCCATCATGATGATCATGATGATCATGATCATGATCATGATCATGATGATCATGATGATCATCATGATCATGATCATCATGATCATCATGATCATCATGATCA$ GGCACAGCCGGCTCTTCTGGGTCCAAATTGTCCTGTGGCGGCAAGGCTTCTACTACCCGCTGGGCATCGTCCGGG AGGACTGCCGCGCCTTCTTGACCTTCACTGTGGACCCCCAGGGCGCCTGCAACCTCGATGATGCCCTCAGTGTCC GAGACCTGGGTCCCAGGTGCGAGGTGGCTGTGCACATCACTGATGTGGCCAGCTTCGTGCCCAGGGACGGGGTGC TGGACGTGGAGGCGCAAGGCAGGGCGCTGCGTTCTATGCCCCCGGCAGGGAGCCAGTGCCCATGCTGCCGGCCA GCCTCTGCCAGGACGTCCTCAGCCTCGCCTGGCCGGGACCGCCTGGCCATCTCCCTGTTCCTCACCATGGAGA AGGCCAGTGGCCAGCTGAAGAGCCTGCGCTTTGCACCCTCCGTGGTCCAGTCTGACCGCCAGCTGTCCTACGAGG ${\tt CGGACGAGGACGCACCCTGGGCTTCCGCGCGCCCCACATCATGGTGAAGGAGTACATGATTCAGTTTAATAGGC}$ GCCAGCAGCTCAAGGCCCTGTGAGAAGCATGGGGACCGGGTGCCCCTGTCACTGCACCTCGGCCACCACCTGC CCCGCACCCAGGACTACGAACAGATGGTGGACTTGGTCACCACGGACGACATGCACCCATTCCTGGCTCCTGCAG GCCGCGACCTCCGCAAGGCCCTGGAGCGCTCGGCGTTCGGCCGCTGCGCCCGGGGCCACCAGCAGCAGGGCCGCC GGCAGATCCTGCTGGCGCTGGGCCATGGGGGCTCTGCCTACTCTGCCAGGGACATCGATGGGCTCTGCCAGGCCT

6355/6881 FIGURE 5867B

CCCAGCCTCTGGACAAGCTGGGCTTCGTGGTGGACGTGGACGCGGCTCCCGCTGCTTCCGGCTGCTCCCCA GCAACCGGGAGACGCTGCCCTGACCCCTGCCCCTACGGCTCCCTGCAGCTGGCCGAGCACCCCCACGCCC TGGAGCTGCAGCGCTGGCCGGAGGCGGCTGCTCTCATCCAGGAGAAGGGCGAGGCGTCCCAGCGGCGGAGCTGG TGCAGGTGCAGCGGAGCCACTGTGGCCATTTCCTGGAGGTGGCCCGGGAGCTGGGCAGTGGGGACACCCTGCAGG TGCAGCTCGGCACCAGCCTGCAGCACGGCTTCCTGGTACCGAGCCCTCAGCTCTGGACGGTGGCACCGGGCTTCA GCCTCTGCCTGGAGCACGTGGAGCCGGCCCGGAGACTGCTTCTCAGGCCGTGTGTACCGGGCCCCGAGGGACCGGT ACCGCGACGTGGATGAGTACGCCTGCGTGTGGGAACCATTCTGCGCCCTGGAGTCGGCCACCGGCGCGCTTGCCG AGAATGACTCCGTCACACTTCAGCACCTGAGTGTCTCCTGGGAGGCGTCACGGACGCCGCAGGGGCAGCTGCAGG GCGCCTTCCGCCTGGAGGCCGCCTTCCTCGAGGAGAACTGTGCCGACATCAACTTCAGCTGCTGCTACCTCTGCA TCCGGCTCGAGGGGCTGCCGGCTCCCACGGCCAGCCCTGGGCCCAGCAGCCTCGGCCCTGAATG TTGACCCCGGCACGTATACCTGGGTGGCCCACGGGCAGACGCAGGACTGGGACCAGGAGCGCCGGGCAGACCGGC AGGAGGCTCCCAGACGGGTGCACCTCTTCGTCCACCACATGGGCATGGAGAAGGTTCCGGAAGAGGTGCTGAGGC TCCACATCGTATTCTGGTTTCATAAATCAAACCAGGAGCAGGTGCAGCCCGGAGGCCCCCCCGTGGGGAGAAGC GGCTGGGGGGTCCCTGCATCTTGTACTGCGGCCCCTCCAACAAGTCGGTGGATGTCCTGGCAGGACTGCTCCTGA GAAGGATGGAGCTGAAGCCCCTCCGTGTGTACAGTGAGCAGGCTGAGGCCAGCGAGTTCCCAGTGCCGCGTGTGG GCAGCAGGAAGCTGCTCAGGAAGAGCCCCCGGGAGGGGAGGCCGAACCAGAGCCTCAGGAGCATCACCCTGCACC ACCGGATCCGGCAGGCCCCAACCCTTACTCGTCGGAAATCAAGGCCTTTGACACCCGGCTGCAGAGAGGGGAGC TCTTCTCCAGGGAGGACCTGGTCTGGTACAAGAAGGTCTTGTGGGAGGCTCGGAAGTTCGAGCTGGACCGGCATG AGGTCATCCTCTGCACCTGCTCCTGTGCAGCCTCTGCCAGACTCCTGGACGTGAGGCAGATCCTTGTTG ACGAGGCAGGCATGGCCACGGAACCTGAAACCCTCATCCCCTGGTGCAGTTCCCACAGGCCGAGAAGGTGGTTC TTCTCGGAGACCACAAGCAGCTGCGGCCTGTGGTCAAGAATGAGCGGCTGCAAAACCTGGGTCTGGACCGGTCTC CCTCTGTGGCGTTCTACAAGAGCAAGCTGAAGACGTGGCAGGGCCTGAGGAGGCCGCCCAGTGTCCTGGGCCACG CTGGCAAGGAGAGCTGCCCTGTCATCTTTGGCCACGTGCAGGGCCACGAGCGGAGCCTGCTGGTGTCCACGGACG AAGGGAATGAGAACTCCAAGGCCAACCTGGAGGAGGTGGCTGAGGTGGTCCGTATCACCAAGCAGCTGACCCTGG GGAGGACCGTAGAGCCCCAGGACATCGCCGTCCTCACGCCCTACAACGCGCAGGCCTCTGAGATCAGCAAGGCCC TTCGGCGAGAGGGCATCGCCGGGGTGGCCGTGTCCTCCATCACCAAGAGCCAGGGGAGCGAGTGGCGCTATGTGC TGGTGAGCACCGTCCGCACCTGTGCCAAGAGCGACCTGGACCAGCGGCCCACCAAGAGCTGGCTCAAGAAGTTTC TGGGCTTCGTTGTGGACCCCAACCAAGTGAATGTGGCTGTCACGCGGGCCCAGGAGGGGCTCTGCCTGATCGGAG ACCACCTCCTTCTGCGCTGCTGCCCCCTCTGGCGTAGCCTCCTGGACTTCTGCGAGGCTCAGCAGACCCTCGTGC $\mathtt{CTGCCGGCCAGGTGCGCGTCTGCAGGAGGCCAACTATGCCTTCC}$ CTCTTGCTCCTCGGGCATCTGGGGACAGGAACACCTCTCAGGGTGGCCAAGAGGGGCTTCCTTGGGACCAGTG GACGCCACCTGTAATCACTCTGGATGGTGTCTGTGGAGTTCAGGTTTATTTTCTATTTAAATGAACTAAAAGCCA GCATCCTGCCGGGCGTGGTGGCTCACGCCCATAATCCAGCACTTTGGGAAGCCGAGGCGGGCAGATCACCTGAGG TCAGGAGTTCGAGACCATCCTGGCCAACATGGTGAAACCCCGTCTCCACTAAAAATACAAAATTAGCTGGGCGTG GTGGCGGGCGCCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGACTCCAGGAGGCGCAGGCT AACAAAACCAGCATCTGTTACTGGAACAGAGACCTCAGCCCAAGCTCAGGACAAGGAGGCCTCCCTGGGAGAGGG GGCCTTTCTCCCACCATCACCGCCTGTGTCCTTCAGGGGCTGCTGGAGGGCAGCCCAAAGCCAGGGGCCCACCCC

6356/6881 FIGURE 5867C

MSSSPSRSAADIYIREYFHSHVSGGHPEATPLRVMYTDRPLSQTDPVTLQYCCLTDDRQAFRPPTRAELARHRVV $\verb|VTTTSQARELRVPVGFFSHILIDEAAQMLECEALTPLAYASHGTRLVLAGDHMQVTPRLFSVARARAAEHTLLHR| \\$ LFLCYQQETHEVARQSRLVFHENYRCTDAIVSFISRHFYVAKGNPIHARGKVPPHPRHYPLMFCHVAGSPDRDMS MASWLNLAEIAQVVEKVQEAYNTWPSCWGGREQRCICVVSHGAQVSALRQELRRRDLGQVSVGSFEILPGRQFRV VVLSTVHTCQSLLSPGALAPEFFTDARVLNTVLTRAQSQLVVVGDAVALCSFGACGKLWESFIRECVERHSVCPE GLSMEQVEQGVAQRRRWPPRGTQAGAAGNWEAAPEPVGDLAEEQAAVVTAMVKAEPGDEALSPASRDITATTAQT EAAAAPAGDAVKEDVVPGACAAGAAAAGVESTEAEDAEADFWPWDGELNADDAILRELLDESQKVMVTVGEDGL LDTVARPESLQQARLYENLPPAALRKLLHAEPERYRHCSFVPETFERASAIPLDDASSGPIQVRGRLDCGMAFAG DEVLVQLLSGDKAPEGRLRGRVLGVLKRKRHELAFVCRMDTWDPRIMVPINGSVTKIFVAELKDPSQVPIYSLRK GRLQRVGLERLTAEARHSRLFWVQIVLWRQGFYYPLGIVREVLPEASTWEQGLRILGLEYSLRVPPSDQATITKV AFYAPGREPVPMLPASLCQDVLSLLPGRDRLAISLFLTMEKASGQLKSLRFAPSVVQSDRQLSYEEAEEVIRQHP GAGRELPARLDSVDACVVAACYFSRLLRRHRLRSDCFYEQPDEDGTLGFRAAHIMVKEYMIQFNRLVAEFLVGSE CTRTVTPLRWQPAPRSQQLKALCEKHGDRVPLSLHLGHHLHGGGGSPPDTRLHLLASLWKQVQFAARTQDYEQMV DLVTTDDMHPFLAPAGRDLRKALERSAFGRCARGHQQQGGHYSLQVDWYTWATSPIRRYLDVVLQRQILLALGHG GSAYSARDIDGLCQAFSLQHALAQSYQRRARSLHLAVQLKAQPLDKLGFVVDVEAGSRCFRLLFPSNRETLPDPC PVPYGSLQLAEHPHALAGRPGLRLLWRRRVYSAQGSSPPLPLPGTVPDPHTLAVETALWKQLLELVELQRWPEAA ALIQEKGEASQRRELVQVQRSHCGHFLEVARELGSGDTLQVQLGTSLQHGFLVPSPQLWTVAPGFSLCLEHVERP GDCFSGRVYRAPRDRYRDVDEYACVWEPFCALESATGAVAENDSVTLQHLSVSWEASRTPQGQLQGAFRLEAAFL EENCADINFSCCYLCIRLEGLPAPTASPRPGPSSLGPGLNVDPGTYTWVAHGQTQDWDQERRADRQEAPRRVHLF VHHMGMEKVPEEVLRPGTLFTVELLPKQLPDLRKEEAVRGLEEASPLVTSIALGRPVPQPLCRVIPSRFLERQTY NIPGGRHKLNPSQNVAVREALEKPFTVIQGPPGTGKTIVGLHIVFWFHKSNQEQVQPGGPPRGEKRLGGPCILYC GPSNKSVDVLAGLLLRRMELKPLRVYSEQAEASEFPVPRVGSRKLLRKSPREGRPNQSLRSITLHHRIRQAPNPY SSEIKAFDTRLQRGELFSREDLVWYKKVLWEARKFELDRHEVILCTCSCAASASLKILDVRQILVDEAGMATEPE TLIPLVQFPQAEKVVLLGDHKQLRPVVKNERLQNLGLDRSLFERYHEDAHMLDTQYRMHEGICAFPSVAFYKSKL KTWQGLRRPPSVLGHAGKESCPVIFGHVQGHERSLLVSTDEGNENSKANLEEVAEVVRITKQLTLGRTVEPQDIA VLTPYNAQASEISKALRREGIAGVAVSSITKSQGSEWRYVLVSTVRTCAKSDLDQRPTKSWLKKFLGFVVDPNQV ${\tt NVAVTRAQEGLCLIGDHLLLRCCPLWRSLLDFCEAQQTLVPAGQVRVCRRPTMPS}$

<u>ATG</u>GACGAGGAGAGCCTGGAGTCGGCCTTGCAGACCTACCGTGCGCAGCTGCAGCAGGTGGAGCTGGCCTTGGGC GCCGGCCTGGATTCGTCTGAGCAGGCTGACCTGCGCCAGCTGCAGGGGGACCTGAAGGAGCTCATCGAGCTCACC GAGGCCAGCCTGGTGTCTGTCAGGAAGAGCAGCTTGTTGGCCGCGCGGACGAAGAGCGCCCGGGCCGCCAGGAA GATGCTGAGTACCAGGCTTTCCGGGAGGCCATCACTGAGGCGGTGGAGGCACCAGCAGCGGCCCGTGGGTCCGGA GAGGAAGAGCTGAGTGGGACAAAGGTGAGCGCCCCTACTACAGCTCCTGGGGCACTCTGGAGTATCACAACGCC ATGGTGGTGGGAACGGAAGAGGCGGAGGATGGCTCGGCGGGTGTCCGTGTGCTTACCTGTACCCCACTCACAAG TCTCTGAAGCCGTGCCCGTTCTTCCTGGAGGGAAAGTGCCGCTTTAAGGAGAACTGCAGGTTCTCCCATGGGCAG GTGGTCTCTCTGGATGAGCTGCGCCCCTTCCAGGACCCAGACCTGAGCTCCCTGCAGGCCGGCTCTGCGTGTCTG GCCAAGCACCAGGATGGCCTCTGGCACGCAGCACGCATCACCGATGTGGACAACGGCTACTACACAGTCAAGTTT GACTCGCTGCTGAGGGAGGCCGTGGTGGAGGGGGACGGCATCCTGCCCCCACTGCGCACAGAGGCCACAGAG TCCGACTCAGACAGCGACGGTACGGGTGACTCCAGCTATGCCAGAGTGGTGGGGTCAGATGCTGTGGACTCTGGG ACCTGCAGCTCTGCCTTTGCTGGCTGGGAGGTGCACACGCGAGGTATAGGCTCCAGACTCCTCACCAAGATGGGC GGGAAGTCGCTGGACCAGTGTGTGGAGACCCTGCAGAAGCAGACCAGGGTTGGCAAGGCTGGCACCAACAAGCCC CCCAGGTGCCGGGGAAGAGGGGCCAGGCCTGGGGGCCCCCAGCTCCTCGGAATGTGTTTGACTTCCTCAATGAA AAGCTGCAAGGTCAGGCCCCTGGGGCCCTAGAAGCCGGGGGCGCCCCAGCGGGGAGGAGGAGCAAGGACATGTAC CATGCCAGCAAGAGTGCCAAGCGGGCCCTGAGCCTGCGGCTCTTCCAGACTGAGGAGAAGATCGAGCGAACCCAG CGGGACATCAGGAGCATCCAGGAGGCTCTCGCCCGCAACGCTGGCCGGCATAGCGTGGCGTCAGCCCAGCTGCAG GAGAAGCTGGCAGGAGCCCAGCCGCCAGCTGGGGCAGCTCCGGGCTCAGGAAGCCGGCCTGCAGCAGGAGCAGAGG AAGGCAGACACCCACAAGAAGATGACTGAGTTCTAG

MDEESLESALQTYRAQLQQVELALGAGLDSSEQADLRQLQGDLKELIELTEASLVSVRKSSLLAALDEERPGRQE
DAEYQAFREAITEAVEAPAARGSGSETVPKAEAGPESAAGGQEEEEGEDEEELSGTKVSAPYYSSWGTLEYHNA
MVVGTEEAEDGSAGVRVLYLYPTHKSLKPCPFFLEGKCRFKENCRFSHGQVVSLDELRPFQDPDLSSLQAGSACL
AKHQDGLWHAARITDVDNGYYTVKFDSLLLREAVVEGDGILPPLRTEATESDSDSDGTGDSSYARVVGSDAVDSG
TCSSAFAGWEVHTRGIGSRLLTKMGYEFGKGLGRHAEGRVEPIHAVVLPRGKSLDQCVETLQKQTRVGKAGTNKP
PRCRGRGARPGGRPAPRNVFDFLNEKLQGQAPGALEAGAAPAGRRSKDMYHASKSAKRALSLRLFQTEEKIERTQ
RDIRSIQEALARNAGRHSVASAQLQEKLAGAQRQLGQLRAQEAGLQQEQRKADTHKKMTEF

6360/6881 FIGURE 5871A

CGCTGCCGGTGCCGCACCCGCCGCCCTCTGCCGCCGCCGCCGCCGCCCGGGGTCTCCAGGCTGAGGAGTGCGT CGGGCAGAATAGCCTAACATGGCAGACCAGAGACAGCGCTCACTGTCTACCTCTGGGGAGTCATTGTACCACGTC CTTGGGTTGGACAAGAACGCAACCTCAGATGACATTAAAAAGTCCTATCGGAAGCTTGCCTTGAAATATCACCCC GACAAGAACCCCGACAACCCGGAGGCCGCGGACAAGTTTAAGGAGATCAACAACGCGCCACGCCATCCTCACGGAC GCCACAAAAAGGAACATCTACGACAAGTACGGCTCGCTGGGTCTCTACGTGGCCGAGCAGTTTGGGGAAGAAAAC GTGAACACCTACTTCGTGCTGTCCAGCTGGTGGGCCAAGGCCCTGTTTGTCTTCTGCGGGCCTCCTCACGTGCTGC TACTGCTGCTGTCTGTGCTGCTGCTTCAACTGCTGCTGCGGGAAGTGTAAGCCCAAGGCGCCTGAAGGCGAG CCGATCGTCATACAGCCGGCATCCGCCACCGAGACCACCCAGCTCACAGCCGACTCCCACCCCAGCTACCACACT GCCCACCCAGCGTCGACCCTTGACCCACGAAGTGCGTAGCATGCAGTATTTAAAGCAGTGTAGCTACGGTCTTCT GTTTTTTCCCTTTTTTAATAGCATGTATGGGGTTCTGTTCCATGTCTGTGTTGTGGACATTCCGCGGCATGACC GCGTGAACTGCACGGTGGAGCTGCCTCAGGGCTGTCGGTCAGGTTGGTCCAGTGAGGGGGTGACTGCAGCCGGTCA GGTGGGCGAGGAGAAGGGGGGCTGCCCCTTTCCTACCTGTGCTTGAGGGGCCGGAGGCAGGTGCTGCCTGGCAGA GCTGTGTTACCGTCTTGGCCTCGGGGTCTGGTCCACACTCTGTGCTCCCAGCCTTGAGGCTGCAGTAGGACTCTG ATCTCACCTGCCAGAAGAGAGGCGGGGCCGCGTCCTCCTGGCGTCACCGGCGTCACTGTCATTCCTTGGTGTCTG TGCTGGGCATGGTTGGCTTGGGGGTCTGTGGTTTCCTGGGCCTTGTGGCAGGGTTTCTCCCGTGGGAGAATTTGG TGTGGAAAGCATAGGAGGCCCCTTCCGAGGTTGACACCGTGTCCTCCGCGGTGTTTCTCGCCTGGTCGTCTCGTC GTGTGGACGCTGCCGTTCTGGTTCTCGGAGGTGTGTCCTTCGCCGTGTTGGGGTTATTTGTCTGTGTTCCTGCAC TTTTCCCGGGCTCTGAGCTGGATTGATGGGGCCAGTCTCCCCCCTCCCATCTTGAGGTCGTTCTCCACATTCCTT CCAGCACCCTGTCCTTTCCATAGCCCTTTTTGGACCTTTAGAACCACAGATGATAGGACCAGCCCAATGAGCCA CAGTCAGAGAGTAGATTGTGCATGTGAGCACCCAGCTACTGGGGACGGGGGCTCTCCCACGACCCCTCCTCCT GTGTTTGCCAGAGCTCCCATCTGCCCCACTCGCCTTTGCCCCGTCATCGATGATTCAGGCAGAGCCAGATTCGTT AGGTCCCTGGAGGAAGGACTGACTGGACCAGAGGGACCCTCTGGCTCAGGAGGGTTGGGTCCCTGGGAGGCCGGC AGCCAGGCCACAGAATCCACACGTGGACCATTGTGGGTCCCTGGGAGGCCGGCAGGCCACGGAATCCACAC TCTTGCGTGTCCTAGACCTTGTGGGTGGCGCCCTGCATAGGGGAGCAGGGGGAACGGGTCTGATGTCCCTGTGCT ACTCCAGTGGGCCTGGTTTCTGCAGAATGTCCATGGTGGCCGCTGCAGAGTTGCAGAGGTCCCTGTAGAGATAAA TGCCTGCTGACCCGTGGCCCCAGCTCACTCATTGCCCTCAGCAGCCACCCGAGGCTGTGCAGAAGGGTAGGTTCA GGTTGACCAGGAAGCTGCCAAAAGGGACATGGATATGAGGATACATCTGGACGTGCTTAGGAACAGGGTGCTGGT TGAGGGCCCCCAGCTGACCCCTACTGCAGATCCGCATGTGGACCATGAGCCGGCTGCCAGCACTAGGTCCTGGGC TGCACTGTGATATTAAATTAGAAATAATTTATCAAAATCAGACCTCTCCTAAAAGAATAAGAAATTCATTGTTTG GCCCATCCTGAAAGGTGAGGTGGCGAGACAGTGGGGTGCCTCCGTGCCGCTTCGTGCAGCAGCAAGTTCAGCCTG AGATGCTGGCTGTACTCAGCCTTTGCAATTTTTGTAGATGTAGCTTAGGACGTGAGTTATTTTTCCGCAGACTGG CCAAGAGCCAGGTTCTAAGCTTGGACCTAAGGTAGAAAGCTGCCCATCGGGGGCCCTAGCTCAGCCCCACCAGGC CCTCTGTTGGGCCTGCACACAGCTCTGTGGCTAGAACACTCCAAGGCCCTTCGGTACCCATCAGAGTGGGCCCCT TGCCAGGTGGCTTTTCAGTTACAGAGTCCAGTGGACCATTTTGTAGAACCATGCAGCTCCCTGCGGAAGGTGGGG TAGGGTGGGAAAGAGGAGCAGGTCTGGAGGTTTGTGGAACCCAGTCCCCTGCAGAATCTGTAAAACCTAATAAAT CATGGTTGTGGCCATTCTCACGGTGGTGATTGTGATTAGACGACCCCCGGGAAGCCCAGACACTCGGGGCCTGGA GTTCCTCCCCTGCCTGACCTAGAAGCAGAACCGTTTTCAGCGCTCTGCCCTGTTGGCTTTAAGGCTTTGTCTTA ATTTAAGGAAAAAGATCCTCCCGGGTTTTATTTCTCTCTTTTCTTGAGTGGACTGTTTCCCTATAATTAAAAGAGG TGGTGAGTCCTGGGGCAGCTTCCGCGCCTCCCTGTCCACGTGCTAACAGATCAGGACGCCCCCAGCACCCCTGCC TGCTTTTGCTGGTGGCAGTGACGGGACCCCGACTCCTCACTCTCGGGCCGCAGACAATGCTGTGAGCAAGTGTGG

6361/6881 FIGURE 5871B

CCATGGGCACAGAATGTCCCTTTGGACGCCGCTGCTGGGGGGCTGCCAGGGGCCCTCTGGGGGTCGTGCTTTGAGGC CTTTATTTTTAAACTGCTTTAGATATTACTGCTCAGTGTTTGTGAACTTTCCTAGTTCTCTATGTTGTTAGTGCA GCCAGCACCCAGTGGGGACCTACTAGAAAAAGGAACTGGCATGCACACGTGCCCAGCAGGAAAAGCTTCGTCTTC ACGTCGGCTGCCATCCAGAAGAGGCCCTGGAGCCTCACGCCGTCGAGGCTGCTCTCAGGCGTTCTGTTCCGG GCGAGGCTTGTGCTGCAAGGAAGGGCACCAGCATGCAGGCTGCCACTGGAGGGTCCGGGTGCTGCGGGCAGAGTT ${\tt CAGCGCTTGTCCACCCTCCCTTAGCTCTGACTCAGTGCATCCTACTGTGGGGACATCTCGTGAGGGGACACGAAA}$ TGACTGATCTCACCCTTTCCCAGTATTCAGAGCTGTGAACCCCTGTGGCGCAGGACTGGCCTGTGTCTTATTT TGGTTGTAAATCATTCTCCTGTGGAATTGGCAAAAGCTACATTTTTACTGTCCTTACCAGCAACAGTTTGCGTCG GTGTCATTCATGCTGCTGTCCCCTGGTGAAGTGACAAGTACAATTAAAGGTGGCTCTGAAATGGCCTCTGGTTTC AGAGGGTGTGCCCAGGGCACTGCCACGGCCCCACCAGCATTGGCCTCTGCTCTGCAGGGTGGGGTGCCCATC TTCCCTGCCTTGAAACATGAAAGCTGATTTTCTGAGCAGCAGATACGGTCAGTGGCAAAGCTGCATCTGAAGGGC AGGTGAGGGGGGAAGTTAACACTGAAATATGTATTGTTTTTAAAAAATCAAATGCACACGCATGGAAGCTGCTTGT CCATGCACTGGTTTTGTCACTGGCGTCCTGGAATCCGACCGTGTTGGGGTGCAGGCGCTGTCAGACTCCGGCTGA TCCTGGCTCGAGCACACACATCTAAGGGCCAGGCTGGTTCCGCATGGTGATCTCCGTCTTGTATGTCTGAATGTT GGCCTAAAATAAAGATTACTGTTGTAAAAT

MADQRQRSLSTSGESLYHVLGLDKNATSDDIKKSYRKLALKYHPDKNPDNPEAADKFKEINNAHAILTDATKRNI YDKYGSLGLYVAEQFGEENVNTYFVLSSWWAKALFVFCGLLTCCYCCCCLCCCFNCCCGKCKPKAPEGEETEFYV SPEDLEAQLQSDEREATDTPIVIQPASATETTQLTADSHPSYHTDGFN

 $\tt CTACGGAGTGCATCGGACGTCGAAGCCTAGAGTCTCTGCGTCTTTCCCTCTTCCGCTGCCTCATTCCTTTCCTTC$ GATGACGACGAGGATCTAAATGACACCAATTACGATGAGTTTAATGGCTATGCTGGGAGCCTCTTCTCAAGTGGA GAAAGACGGGAGCAAAGGGAAAAGAAGAAATAGAGAAATATCGTATGGAACGCCCCAAAATCCAACAGCAGTTC TCAGACCTCAAGAGGAAGTTGGCAGAAGTCACAGAAGAAGAGGTGGCTGAGCATCCCCGAGGTTGGCGATGCCAGA AATAAACGTCAGCGGAACCCACGCTATGAGAAGCTGACCCCTGTTCCTGACAGTTTCTTTGCCAAACATTTACAG ACCGGAGAGCCATACCTCAGTGGATCCCCGACAAACTCAATTTGGAGGTCTTAACACCCCTATCCAGGTGGA CTAAACACTCCATACCGAGGTGGAATGACGCCAGGACTGATGACACCTGGCACAGGTGAGCTGGACATGAGGAAG ${\tt ATTGGCCAAGCGAGGAACACTCTGATGGACATGAGGCTGAGCCAGGTGTCTGACTCCGTGAGTGGACAGACCGTC}$ GTTGACCCCAAAGGCTACCTGACGGATTTAAATTCCATGATCCCGACACACGGAGGAGACATCAATGATATCAAG AAGGCGCGACTGCTCCTCAAGTCTGTTCGGGAGACGAACCCTCATCACCCGCCAGCCTGGATTGCATCAGCCCGC $\tt CTGGAAGAAGTCACTGGGAAGCTACAAGTAGCTCGGAACCTTATCATGAAGGGGACGGAGATGTGCCCCAAGAGT$ GAAGATGTCTGGCTGGAAGCAGCCAGGTTGCAGCCTGGGGACACAGCCAAGGCCGTGGTAGCCCAAGCTGTCCGT ${\tt CATCTCCCACAGTCTGTCAGGATTTACATCAGAGCCGCAGAGCTGGAAACGGACATTCGTGCAAAGAAGCGGGTT}$ $\tt CTTCGGAAAGCCCTCGAGCATGTTCCAAACTCGGTTCGCTTGTGGAAAGCAGCCGTTGAGCTGGAAGAACCTGAA$ GATGCTAGAATCATGCTGAGCCGAGCTGTGGAGTGCTGCCCCACCAGCGTGGAGCTCTGGCTTGCTCTGGCAAGG CTGGAGACCTATGAAAATGCCCGCAAGGTCTTGAACAAGGCGCGGGAGAACATTCCTACAGACCGACATATCTGG ATCACGGCTGCTAAGCTGGAGGAAGCCAATGGGAACACGCAGATGGTGGAGAAGATCATCGACCGAGCCATCACC TCGCTGCGGGCCAACGGTGTGGAGATCAACCGTGAGCAGTGGATCCAGGATGCCGAGGAATGTGACAGGGCTGGG AGTGTGGCCACCTGCCAGGCCGTCATGCGTGCCGTGATTGGGATTGAGGAGGAAGATCGGAAGCATACC TGGATGGAGGATGCTGACAGTTGTGTAGCCCACAATGCCCTGGAGTGTGCACGAGCCATCTACGCCTACGCCCTG AAGTGGCTGGCAGGGGATGTGCCTGCAGCAAGGAGCATCCTGGCCCTGGCCTTCCAGGCCAACCCCAACAGTGAG GAGATCTGGCTGGCAGCCGTGAAGCTGGAGTCCGAGAATGATGAGTACGAGCGGGCCCGGAGGCTGCTGGCCAAG GCGCGGAGCAGTGCCCCCACCGCCCGGGTGTTCATGAAGTCTGTGAAGCTGGAGTGGGTGCAAGACAACATCAGG GCAGCCCAAGATCTGTGCGAGGGGGCCCTGCGGCACTATGAGGACTTCCCCAAGCTGTGGATGATGAAGGGGCAG ATCGAGGAGCAGAAGGAGATGATGGAGAAGGCGCGGGAAGCCTATAACCAGGGGTTGAAGAAGTGTCCCCACTCC ACACCCTGTGGCTTTTGCTCTCTCGGCTGGAGGAGAAGATTGGGCAGCTTACTCGAGCACGGGCCATTTTGGAA AAGTCTCGTCTGAAGAACCCAAAGAACCCTGGGCTGTGGTTGGAGTCCGTGCGGCTGGAGTACCGTGCGGGGCTG AAGAACATCGCAAATACACTCATGGCCAAGGCGCTGCAGGAGTGCCCCAACTCCGGTATCCTGTGGTCTGAGGCC ATCTTCCTCGAGGCAAGGCCCCAGAGGAGGACCAAGAGCGTGGATGCCCTGAAGAAGTGTGAGCATGACCCCCAT GTGCTCCTGGCCGTGGCCAAGCTGTTTTGGAGTCAGCGGAAGATCACCAAGGCCAGGGAGTGGTTCCACCGCACT GTGAAGATTGACTCGGACCTGGGGGATGCCTGGGCCTTCTTCTACAAGTTTGAGCTGCAGCATGGCACTGAGGAG CAGCAGGAGGAGGTGAGAAGCGCTGTGAGAGTGCAGAGCCTCGGCATGGGGAGCTGTGGTGCGCCGTGTCCAAG

MNKKKKPFLGMPAPLGYVPWLGRGATGFTTRSDIGPARDANDPVDDRHAPPGKRTVGDQMKKNQAADDDDEDLND
TNYDEFNGYAGSLFSSGPYEKDDEEADAIYAALDKRMDERRKERREQREKEEIEKYRMERPKIQQQFSDLKRKLA
EVTEEEWLSIPEVGDARNKRQRNPRYEKLTPVPDSFFAKHLQTGENHTSVDPRQTQFGGLNTPYPGGLNTPYRGG
MTPGLMTPGTGELDMRKIGQARNTLMDMRLSQVSDSVSGQTVVDPKGYLTDLNSMIPTHGGDINDIKKARLLLKS
VRETNPHHPPAWIASARLEEVTGKLQVARNLIMKGTEMCPKSEDVWLEAARLQPGDTAKAVVAQAVRHLPQSVRI
YIRAAELETDIRAKKRVLRKALEHVPNSVRLWKAAVELEEPEDARIMLSRAVECCPTSVELWLALARLETYENAR
KVLNKARENIPTDRHIWITAAKLEEANGNTQMVEKIIDRAITSLRANGVEINREQWIQDAEECDRAGSVATCQAV
MRAVIGIGIEEEDRKHTWMEDADSCVAHNALECARAIYAYALQVFPSKKSVWLRAAYFEKNHGTRESLEALLQRA
VAHCPKAEVLWLMGAKSKWLAGDVPAARSILALAFQANPNSEEIWLAAVKLESENDEYERARRLLAKARSSAPTA
RVFMKSVKLEWVQDNIRAAQDLCEEALRHYEDFPKLWMMKGQIEEQKEMMEKAREAYNQGLKKCPHSTPLWLLLS
RLEEKIGQLTRARAILEKSRLKNPKNPGLWLESVRLEYRAGLKNIANTLMAKALQECPNSGILWSEAIFLEARPQ
RRTKSVDALKKCEHDPHVLLAVAKLFWSQRKITKAREWFHRTVKIDSDLGDAWAFFYKFELQHGTEEQQEEVRKR
CESAEPRHGELWCAVSKDIANWQKKIGDILRLVAGRIKNTF

PCT/US2003/028547

6365/6881 FIGURE 5875

GTCGGGCCGGACCTTGGAGCGCGGCGGCGGCGGCGGCGGCGGGTGGCTCGGGAGCGCGGCTGACCCCCAGGCTGT TGAGAAGCAGATCACAGGGCCAGAGGAGGCGGACCGGCCCCTTCAATGTCCAGTCATGATACAGCCTCTCCAGC GGCCCCAGCCGCAACCCCTGCTGCCTGTGCTGGTGCTGCTGCTGTAGCTGCTCCTGGAACCAAGAGCGGCGGCG CGCGTGGCAGGCCTCCCGGGAGAGCAAGCTGCAGCCCCTCCCCAGCTGTGAAGTATGTGCCACGCCAAGTCCTGA GGAGGTGCAGAGCTGGGCGCAGTCTTTTGACAAGCTGATGCACAGCCCAGCGGGACGCAGCGTGTTCCGGGCGTT CCTGCGGACAGAGTACAGCGAGGAGAACATGCTCTTCTGGTTGGCCTGCGAGGAGCTGAAGGCCGAGGCCAACCA GGACTCCCGTGTGCGGGAGGGCATCAACAAGAAGATGCAGGAGCCGTCCGCACACACGTTCGACGACGCGCAGCT GCAGATCTACACGCTCATGCACCGGGACTCCTACCCCCGCTTCCTCAGCTCTCCCACCTACCGTGCCTGCTGCT GCAGGGGCCATCACAGTCCTCCTCCGAGGCCTAGGCCGCCCCAGCAGCACAGACCCCGCCGCCTCCTACGGCCG ACTCTGGGTTCCCTTCAGGTGTTGTTGTCGGCAGGGCTGTCAGGGCACATGCCTGGCCGGCTGGGGTCCCCACCC GCGGAGACGGTCCTAGACCCAGTGGGGAGTGCTGTGTCTCCTGGGTCTGCCCACCCGTGGCCAAGCAGGAACTCC AGGTGCAGGGCGGCCTCCAGGTGCAGGGCCGGCCAGAAGCCCCCTCATCGGCCCGCAGCTGGCCCAGTGC TCCTGGCTGGGGGCTCTTGCGTGGTGAGAGTAGGGGTCCCCCCAGGAGCCATGCTGGACCCATGAGCCTCGCTGG GGCCTCCTCCCCAGGCAGCCAATGGGCCCCAGACAAGCCTTTGGTGGGGAACAGAACCTCCGCATCGTGTAGTTT TGTGACATAAGGAGACCTCCTACTTGAGCTGTCTGTACCCCAGAATCAAACACAGAACCTCAGAACCAGATTTAG GACCTCAGAATCCTGCACTCAAGGTGGCAGGACCCAATTTCTGTTTTATATGTTCATGAACTTTAAACCTGGAAA CATGTCCTTACTAGGTGTTTTATCAAAAAAAAGTTTTCATATTTATCTCTATCCCTAACCCCCCAAAAATAGGAT GTCTTATTATTGAAGATATTTTTAAAGC

6366/6881 FIGURE 5876

GGAAAACCGTGTACTATTAGCCATGGTCAACCCCACCGTGTTCTTCGACATTGCCGTCGACGGCGAGCCCTTGGG
CCGCGTCTCCTTTGAGCTGTTTGCAGACAAGGTCCCAAAGACAGGCTTTCACAGAATTATTCCAGGGTTTAT
GTGTCAGGGTGGTGACTTCACACGCCATAATGGCACTGGTGGCAAGTCCATCTATGGGGAGAAATTTGAAGATGA
GAACTTCATCCTAAAGCATACAGGTCCTGGCATCTTGTCCATGGCAAAATGCTGGACCCAACACAAATGGATCCCA
GTTTTTCATCTGCACTGCCAAGACTGAGTGGTTGGATGGCAAGCATGTGGTGTTTTGGCAAAGTGAAAGAAGACAT
GAATATTGTGGAGGCCATTGGAGCGCTTTGGGTCCAGGAATGGCAAGACACAAGAAGATCACCATTGCTGACTG
TGGACAACTCGAATAAGTTTGACTTGTGTTTTATCTTAACCACCAGGTCATTCCTTCTGTAGCTCAGGAGAGCAC
CCCTCCACCCCATTTGCTCCAGGATATCCTAGAATCTTTGTGCTCTCGCTGCAGTTCCCTTTGGGTTCCATGTTTT
CCTTGTTCCCTCCCATGCCTAGCTGGAT

GCTCGATGGTCGAGGCCATCTCCTGGTCCGCCTGGCGGCCATCGTGGCTAAACAGAACAAGTTGAAGTACCTGGG
TTTCCTCCGCAAGCGGATGAACACCCACCTTTCCCGAGGTCCCTACCACTTCCGGGCCCCCCAGCCGCATCTTCT
GGCGGACCGTGCGAGGTATGCCGCCCCACAAGACCAAGCGAGGCCAGGCTTCTCTGGACCGCCTCAAGGTGTTTG
ACCGCATCCCACCGCCCTACGACAAGAAAAAGCGGATGGTGTTCCTGCTCCCTCAAGGTTGTGCGTCTGAAGCCT
ACAAGAAAGTTTGCCTATCTGGGGCGCCTGGCTCACGAGGTTGGCTGGAAGTACCAGGCAGTGACAGCCACCCTG
GAGGAGAAGAGGAAAGAAAAGCCAAGATCCACTACCGGAAGAACAAGCTCATGAGGCTACGGAAACAGGCC
GAGAAGAACATGGAGAAGAAAATTGACAAATACACAGAGGTCCTCAAGACCCACAGACTCCTGGTCTGAGCCCAA
TAAAGACTGTTAATTCCT

ACGAGGGGAAGAAAGGAGTTGGGGCAAAACAGGAGGCGTTTCCCTACCCGCATACATCCCCGTCCCCGAGACACC CGGACCAGACACAAAGCCGATCAATCCCGGAGGCGTGGGGGCGGAGGGACGACCCGCCGGGGCTTTCCCGGGCGC TGCTCTCCTCCTGCCCCCCCCCCCCAGGACCCGGCGCACCCCTCGGTTTTCACGCCCTCTAGCCCCTACC TTCCCGCCCCAGAAGTTCAAGGGCCCCCGGCCTCCTGCGCTCCTGCCGCCGGGACCCTCGACCTCCTCAGAGCAG $\texttt{CCGGCTGCCGCGCGGAAG} \underline{\textbf{ATG}} \\ \texttt{GCGAGGAGGAGCCGCCACCGCCTCCTCCTGCTGCTGCTACCTGGTGG} \\$ TCGCCCTGGGCTATCATAAGGCCTATGGGTTTTCTGCCCCAAAAGACCAACAAGTAGTCACAGCAGTAGAGTACC GTGTCTCCTTTGTCTACTATCAACAGACTCTTCAAGGTGATTTTAAAAAATCGAGCTGAGATGATAGATTTCAATA TCCGGATCAAAAATGTGACAAGAAGTGATGCGGGGAAATATCGTTGTGAAGTTAGTGCCCCATCTGAGCAAGGCC AAAACCTGGAAGAGGATACAGTCACTCTGGAAGTATTAGTGGCTCCAGCAGTTCCATCATGTGAAGTACCCTCTT $\tt CTGCTCTGAGTGGAACTGTGGTAGAGCTACGATGTCAAGACAAAGAAGGGAATCCAGCTCCTGAATACACATGGT$ TTAAGGATGGCATCCGTTTGCTAGAAAATCCCAGACTTGGCTCCCAAAGCACCAACAGCTCATACACAATGAATA CAAAAACTGGAACTCTGCAATTTAATACTGTTTCCAAACTGGACACTGGAGAATATTCCTGTGAAGCCCGCAATT $\tt CTGTTGGATATCGCAGGTGTCCTGGGAAACGAATGCAAGTAGATGATCTCAACATAAGTGGCATCATAGCAGCCG$ TAGTAGTTGTGGCCTTAGTGATTTCCGTTTGTGGCCTTGGTGTATGCTCAGAGGAAAGGCTACTTTTCAA ${\tt AATCCTTTATAATT} \underline{{\tt TAA}} {\tt AGACTCCACTTTAGAGATACACCAAAGCCACCGTTGTTACACAAGTTATTAAACTATT}$ ATAAAACTCTGCTTTGTCCGACATTTGCAAAGAGGTACACGAGGAAATGGAATTGGTATTTCATTTTAATTTTCA TGACTACTAACTCACCTGAACTTGCTATTTTAAACAAATAGTTCTGTCGACACCTAAAATATAATCTGGCTTCTT

MARRSRHRLLLLLLRYLVVALGYHKAYGFSAPKDQQVVTAVEYQEAILACKTPKKTVSSRLEWKKLGRSVSFVYY QQTLQGDFKNRAEMIDFNIRIKNVTRSDAGKYRCEVSAPSEQGQNLEEDTVTLEVLVAPAVPSCEVPSSALSGTV VELRCQDKEGNPAPEYTWFKDGIRLLENPRLGSQSTNSSYTMNTKTGTLQFNTVSKLDTGEYSCEARNSVGYRRC PGKRMQVDDLNISGIIAAVVVVALVISVCGLGVCYAQRKGYFSKETSFQKSNSSSKATTMSENDFKHTKSFII

CTGCCCGGTTTGGCACTGCTCCTGCTGGCCGCCTGGACGCTCGGACGCTGCAGGTACCCACTGATGGTAATGCT GGCCTGCTGGCTGAACCCCAGATTGCCATGTTCTGTGGCAGACTGAACATGCACATGAATGTCCAGAATGGGAAG TACCCTGAACTGCAGATCACCAATGTGGTAGAAGCCAACCAGCGGTGACCATCCAGAACTGGTGCAAGCGGGGC CGCAAGCAGTGCAAGACCCATCCCCACTTTGTGATTCCCTACCGCTGCTTAGTTGGTGAGTTTGTAAGTGATGCC ACCGTCGCCAAAGAGACATGCAGTGAGAAGAGTACCAACTTGCATGACTACGGCATGTTGCTGCCCTGCGGAATT GACAAGTTCCGAGGGGTAGAGTTTGTGTGTTGCCCACTGGCTGAAGAAAGTGACAATGTGGATTCTGCTGATGCG GAGGAGGATGACTCGGATGTCTGGTGGGGCGGAGCAGACACAGACTATGCAGATGGGAGTGAAGACAAAGTAGTA GAAGTAGCAGAGGAGGAAGAAGTGGCTGAGGTGGAAGAAGAAGAAGCCGATGATGACGAGGACGATGAGGATGATGAT GATGAGGTAGAGGAAGAGGCTGAGGAACCCTACGAAGAAGCCACAGAGAGAACCACCAGCATTGCCACCACCACC ACCACCACCACAGAGTCTGTGGAAGAGGTGGTTCGAGAGGTGTGCTCTGAACAAGCCGAGACGGGGCCGTGCCGA GCAATGATCTCCCGCTGGTACTTTGATGTGACTGAAGGGAAGTGTGCCCCATTCTTTTACGGCGGATGTGGCGGC AACCGGAACAACTTTGACACAGAAGAGTACTGCATGGCCGTGTGTGGCAGCGCCATGTCCCAAAGTTTACTCAAG ACTACCCAGGAACCTCTTGCCCGAGATCCTGTTAAACTTCCTACAACAGCAGCCAGTACCCCTGATGCCGTTGAC AAGTATCTCGAGACACCTGGGGATGAGAATGAACATGCCCATTTCCAGAAAGCCAAAGAGAGGCTTGAGGCCAAG CACCGAGAGAGAATGTCCCAGGTCATGAGAGAATGGGAAGAGGCAGAACGTCAAGCAAAGAACTTGCCTAAAGCT GATAAGAAGGCAGTTATCCAGCATTTCCAGGAGAAAGTGGAATCTTTGGAACAGGAAGCAGCCAACGAGAGACAG CAGCTGGTGGAGACACACATGGCCAGAGTGGAAGCCATGCTCAATGACCGCCGCCGCCTGGCCCTGGAGAACTAC ATCACCGCTCTGCAGGCTGTTCCTCCTCGGCCTCGTCACGTGTTCAATATGCTAAAGAAGTATGTCCGCGCAGAA CAGAAGGACAGCACACCCTAAAGCATTTCGAGCATGTGCGCATGGTGGATCCCAAGAAAGCCGCTCAGATC CCTGCAGTGGCCGAGGAGATTCAGGATGAAGTTGATGAGCTGCTTCAGAAAGAGCAAAACTATTCAGATGACGTC TTGGCCAACATGATTAGTGAACCAAGGATCAGTTACGGAAACGATGCTCTCATGCCATCTTTGACCGAAACGAAA ACCACCGTGGAGCTCCTTCCCGTGAATGGAGAGTTCAGCCTGGACGATCTCCAGCCGTGGCATTCTTTTGGGGCT ATCATTGGACTCATGGTGGGCGGTGTTGTCATAGCGACAGTGATCGTCATCACCTTGGTGATGCTGAAGAAGAAAA CAGTACACATCCATTCATCATGGTGTGGTGGAGGTTGACGCCGCTGTCACCCCAGAGGAGCGCCACCTGTCCAAG ATGCAGCAGAACGGCTACGAAAATCCAACCTACAAGTTCTTTGAGCAGATGCAGAAC<u>TAG</u>ACCCCCGCCACAGCA GCCTCTGAAGTTGGACAGCAAAACCATTGCTTCACTACCCATCGGTGTCCATTTATAGAATAATGTGGGAAGAAA CAAACCCGTTTTATGATTTACTCATTATCGCCTTTTGACAGCTGTGCTGTAACACAAGTAGATGCCTGAACTTGA ATTAATCCACACATCAGTAATGTATTCTATCTCTCTTTACATTTTGGTCTCTATACTACATTATTAATGGGTTTT CTTAGCCAGTTGTATATTATTCTTGTGGTTTGTGACCCAATTAAGTCCTACTTTACATATGCTTTAAGAATCGAT GGGGGATGCTTCATGTGAACGTGGGAGTTCAGCTGCTTCTCTTGCCTAAGTATTCCTTTCCTGATCACTATGCAT GAATCCCTGTTCATTGTAAGCACTTTTACGGGGCGGGTGGGGAGGGGTGCTCTGCTGGTCTTCAATTACCAAGAA TTCTCCAAAACAATTTTCTGCAGGATGATTGTACAGAATCATTGCTTATGACATGATCGCTTTCTACACTGTATT ACATAAATAAATTAAATAAAATAAACCCCGGGCAAGACTTTTCTTTGAAGGATGACTACAGACATTAAATAATCGA AGTAATTTTGGGTGGGGAGAAGAGGCAGATTCAATTTTCTTTAACCAGTCTGAAGTTTCATTTATGATACAAAAG AAGATGAAAATGGAAGTGGCAATATAAGGGGATGAGGAAGGCATGCCTGGACAAACCCTTCTTTTAAGATGTGTC TTCAATTTGTATAAAATGGTGTTTTCATGTAAATAAATACATTCTTGGAGGAGC

MLPGLALLLAAWTARALEVPTDGNAGLLAEPQIAMFCGRLNMHMNVQNGKWDSDPSGTKTCIDTKEGILQYCQE
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HTVAKETCSEKSTNLHDYGMLLPCGIDKFRGVEFVCCPLAEESDNVDSADAEEDDSDVWWGGADTDYADGSEDKV
VEVAEEEEVAEVEEEEADDDEDDEDGDEVEEEAEEPYEEATERTTSIATTTTTTTESVEEVVREVCSEQAETGPC
RAMISRWYFDVTEGKCAPFFYGGCGGNRNNFDTEEYCMAVCGSAMSQSLLKTTQEPLARDPVKLPTTAASTPDAV
DKYLETPGDENEHAHFQKAKERLEAKHRERMSQVMREWEEAERQAKNLPKADKKAVIQHFQEKVESLEQEAANER
QQLVETHMARVEAMLNDRRRLALENYITALQAVPPRPRHVFNMLKKYVRAEQKDRQHTLKHFEHVRMVDPKKAAQ
IRSQVMTHLRVIYERMNQSLSLLYNVPAVAEEIQDEVDELLQKEQNYSDDVLANMISEPRISYGNDALMPSLTET
KTTVELLPVNGEFSLDDLQPWHSFGADSVPANTENEVEPVDARPAADRGLTTRPGSGLTNIKTEEISEVKMDAEF
RHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVITLVMLKKKQYTSIHHGVVEVDAAVTPEERHLS
KMQQNGYENPTYKFFEQMQN

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GCATGCTTTTTTTTTTCCGGTAGGTCGCCAGCTGAGGCGGTTTGTAAGTTTTGGGTCGCAGTATGCTAGAATT TTGAGGCTCCCTTCTGATGAAAATTGAGCTGTCCATGCAGCCATGGAACCCGGGTTACAGCAGTGAGGGGGCCAC GGCTCAAGAAACTTACACATGTCCAAAAATGATTGAGATGGAGCAGGCGGAGGCCCAGCTTGCTGAGTTAGACCT TATTGAAAAGAAGACAATGGAGGGGGGATCTTCAAAAGTCTACTTTACTATCAATATGAACCTGGATGTATCTGA CGAAAAAATGCCGATGTTTTCTCTGGCCTGTATTCTTCCCTTTAAATACCCGGCAGTTCTGCCTGAAATTACTGT CAGATCAGTATTATTGAGTAGATCCCAGCAGACTCAGCTGAACACAGATCTGACTGCATTCCTGCAAAAACATTG TCATGGAGATGTTTGTATACTGAATGCCACAGAGTGGGTTAGAGAACACGCCTCTGGCTATGTCAGCAGAGATAC TCATATCTATAACAAATGCAAAAGAAAGAATATTCTAGAGTGGGCAAAGGAGCTTTCCCTGTCTGGGTTTAGCAT GCCTGGAAAACCTGGTGTTGTTTGTGTGGAAGGCCCACAAAGTGCCTGTGAAGAATTCTGGTCAAGACTCAGAAA ATTAAACTGGAAGAGATTTTAATTCGCCATCGAGAAGACATTCCTTTTGATGGTACAAATGATGAAACGGAAAG ACAAAGGAAATTTTCCATTTTTGAAGAAAAAGTGTTCAGTGTTAATGGAGCCAGGGGAAACCACATGGACTTTGG ${\tt TCAGCTCTATCAGTTCTTAAACACCAAAGGATGTGGGGGATGTTTTCCAGATGTTCTTTGGTGTAGAAGGACAA\underline{{\tt TG}}$ AAGTAATTTTATTTTAGTTCCATTCTAGAATGTTGGGGAGTGGGGCACAAGAAAAAATAGTATAGCTGAAATGCA TCTGTTAAAAATGTCATGATTGAAAGCAGAACTGAGTTTCAAATTACAACCTTAAAATTGTTGTTAGATATTTCT $\tt CCCAACCCCTTCTCCCTTACCTGCCTTCACTAAAGAACCCAGAAAAGCTAATTGCTCCCCTTTCAGCCTCTGTT$ GCAACTAACAACTCTCAGTGGCCTCAGGACACAGCTTTGGCCTTGGGAATTCTGGGAAAACTTTTACTTCCTGAT TANAGATACATATGCAGCTAGGCCACCTCCTCCCCCCTTACTGCCATAAACACCCAAAGTGATGACTGGAGCTGG AGGAGTTATTTGAACCACGACGGAAGGGCCAAGAGAGCCACGAAGATGCCACGTTGCCACATTGTTGAGCTGCTGA AAAA

MKIELSMQPWNPGYSSEGATAQETYTCPKMIEMEQAEAQLAELDLLASMFPGENELIVNDQLAVAELKDCIEKKT MEGRSSKVYFTINMNLDVSDEKMAMFSLACILPFKYPAVLPEITVRSVLLSRSQQTQLNTDLTAFLQKHCHGDVC ILNATEWVREHASGYVSRDTSSSPTTGSTVQSVDLIFTRLWIYSHHIYNKCKRKNILEWAKELSLSGFSMPGKPG VVCVEGPQSACEEFWSRLRKLNWKRILIRHREDIPFDGTNDETERQRKFSIFEEKVFSVNGARGNHMDFGQLYQF LNTKGCGDVFQMFFGVEGQ

 $\tt CGCGTGAACTGCTTCCTGCAGGCTGGCCATGCCGCTTCACGTTCCCAAGGCTCCGGGCTTTGCCCAGATGCTCAAGGCTCCGGGCTTTGCCCAGATGCTCAAGGCTCCGGGCTTTGCCCAGATGCTCAAGGCTCCGGGCTTTGCCCAGATGCTCAAGGCTCCGGGCTTTGCCCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTGCAGATGCTCAAGGCTCAAGATGATGCTCAAGATGCTAAGATTCAAGATTCAAGATGCTCAAGATGCTCAAGATGCTCAAGATGCTCAAGATGCTCAAGAT$ GGAGGGAGCGAAACACTTTTCAGGATTAGAAGAGCTGTGTATAGAAACATACAAGCTTGCAAGGAGCTTGCCCA AAACGATGCAGCAACTATTTTAAGAGAACTAGAAGTACAGCATCCTGCTGCAAAAATGATTGTAATGGCTTCTCA TATGCAAGAGCAAGAAGTTGGAGATGGCACAAACTTTGTTCTGGTATTTGCTGGAGCTCTCCTGGAATTAGCTGA AGAACTTCTGAGGATTGGCCTGTCAGTTTCAGAGGTCATAGAAGGTTATGAAATAGCCTGCAGAAAAGCTCATGA GATTCTTCCTAATTTGGTATGTTCTTCCAAAAAAACCTTCGAGATATTGATGAAGTCTCATCTTCCTACTTCGTAC CTCCATAATGAGTAAACAATATGGTAATGAAGTATTTCTGGCCAAGCTTATTGCTCAGGCATGCGTATCTATTTT TCCTGATTCCGGCCATTTCAATGTTGATAACATCAGAGTTTGTAAAATTCTGGGCTCTGGTATCAGTTCCTCTTC AGTATTGCATGGCATGGTTTTTAAGAAGGAAACCGAAGGTGATGTAACATCTGTCAAAGATGCAAAAATAGCAGT GTACTCTTGTCCTTTTGATGGCATGATAACAGAAACTAAGGGAACAGTGTTGATAAAGACTGCTGAAGAATTGAT GAATTTTAGTAAGGGAGAAAAACCTCATGGATGCACAAGTCAAAGCTATTGCTGATACTGGTGCAAATGTCGT CTCAAAATGGGATCTCCGAAGACTTTGTAAAACTGTTGGTGCTACAGCTCTTCCTAGATTGACACCTCCTGTCCT TGAAGAAATGGGACACTGTGACAGTGTTTACCTCTCAGAAGTTGGAGATACTCAGGTGGTGGTTTTTAAGCATGA AGTAGACGATGGTGTTAATACTTTCAAAGTTCTTACAAGGGATAAACGTCTTGTACCCGGAGGTGGAGCAACAGA AATTGAATTAGCCAAACAGATCACATCATATGGAGAGACATGTCCTGGACTTGAACAGTATGCTATTAAGAAGTT TGCTGAGGCATTTGAAGCTATTCCCCGCGCACTGGCAGAAAACTCTGGAGTTAAGGCCAATGAAGTAATCTCTAA ACTITATGCAGTACATCAAGAAGGAAATAAAAACGTTGGATTAGATATTGAGGCTGAAGTCCCTGCTGTAAAGGA CATGCTGGAAGCTGGTATTCTAGATACTTACCTGGGAAAATATTGGGCTATCAAACTCGCTACTAATGCTGCAGT $\tt CTGGGATGATGACCAAAATGAT{\underline{\textbf{TGA}}} AATTGGCTTAATTTTTACTGTAGGTGAAGGCTGTATTTGTAGTAGTACTC$ AAGAATCACCTGATGTTTTCTTATTCTCCTTAAATTAAGAGTTATTTTGTGTTTTGTATTCTTGGCTGGATGTTAT AATAAACATATTGTTACTGTC

MALHVPKAPGFAQMLKEGAKHFSGLEEAVYRNIQACKELAQTTRTAYGPKGMNKMVINHLEKLFVTNDAATILRE LEVQHPAAKMIVMASHMQEQEVGDGTNFVLVFAGALLELAEELLRIGLSVSEVIEGYEIACRKAHEILPNLVCCS AKNLRDIDEVSSLLRTSIMSKQYGNEVFLAKLIAQACVSIFPDSGHFNVDNIRVCKILGSGISSSSVLHGMVFKK ETEGDVTSVKDAKIAVYSCPFDGMITETKGTVLIKTAEELMNFSKGEENLMDAQVKAIADTGANVVVTGGKVADM ALHYANKYNIMLVRLNSKWDLRRLCKTVGATALPRLTPPVLEEMGHCDSVYLSEVGDTQVVVFKHEKEDGAISTI VLRGSTDNLMDDIERVVDDGVNTFKVLTRDKRLVPGGGATEIELAKQITSYGETCPGLEQYAIKKFAEAFEAIPR ALAENSGVKANEVISKLYAVHQEGNKNVGLDIEAEVPAVKDMLEAGILDTYLGKYWAIKLATNAAVTVLRVDQII MAKPAGGPKPPSGKKDWDDDQND

CCCTGAGGCTTTTCGGAGCGAGCTCCTCAAATCGCATCCAGATTTTCGGGTCCGAGGGAAGGAGGACCCTGCGAA AGCTGCGACGACTATCTTCCCCTGGGGCCATCGACTCGGACGCCAGCCTGGTGTCCAGCCGCCCGTCGTCGCCAG AGCCCGATGACCTTTTTCTGCCGGCCCGGAGTAAGGGCAGCAGCGCCAGCGCCCTTCACTGGGGGCACCGTGTCCT CTGGGGACAAGCTAGGAGGCAGTGGCTTCAAGTCGTCCTCGTCCAGCACCTCGTCGTCGTCGTCGGCGGCGGCTG CGTCGTCCACCAAGAAGGACAAGAAGCAAATGACAGAGCCGGAGCTGCAGCAGCTGCGTCTCAAGATCAACAGCC CTTCGGTGCGCAAGCTTTCCAAGATCGCCACGCTGCTGCTGGCGCGCAACTACATCCTCATGCTCACCAACTCGC TGGAGGAGATGAAGCGACTGGTGAGCGAGATCTACGGGGGCCCACCCCCGCGGCCTTCCACCCGTCGGCCTGCGGCG GCCTGGCGCACTCCGCGCCCCTGCCCGCCACCGCGCACCCGGCAGCAGCAGCACCCGCCACATCACCCCG CGGTGCACCACCCCATCCTGCCGCCGCCGCCGCAGCGGCTGCTGCCGCCGCTGCAGCCGCGGCTGTGTCCAGCG CCTCTCTGCCCGGATCCGGGCTGCCGTCGGTCGGCTCCATCCGTCCACCGCACGGCCTACTCAAGTCTCCGTCTG TGCCCTGCCCTGCAGCATGTGCCAGGTGCCGCCGCCGCACCACCACGTGTCGGCTATGGGCGCCGGCAGCCTGC GGAAGCGAGGACTGGCCTGGGCTCGGGAGCTCTGTCGCGAGGAGGGGCGCAGGACCATGGACTGGGGGTG GGGCATGGTGGGGATTCCAGCATCTGCGAACCCAAGCAATGGGGGGCGCCCACAGAGCAGTGGGGAGTGAGGGGAT GTTCTCTCCGGGACCTGATCGAGCGCTGTCTGGCTTTAACCTGAGCTGGTCCAGTAGACATCGTTTTATGAAAAG GTACCGCTGTGTGCATTCCTCACTAGAACTCATCCGACCCCGACCACCACCTCCGGGAAAAGATTCTAAAAACT AGGGGGACACATTGGGGCCTTGCTCCTCTTCCTCCTTTCTTGGCGGGTGGGAGACTCCGGGTAGCCGCACTGCAG CGTTCGGTATCAGAAGCGCTGATGGTCATATCCAATCTCAATATCTGGGTCAATCCACACCCTCTTAGAACTGTG GCCGTTCCTCCCTGTCTCGTTGATTTGGGAGAATATGGTTTTCTAATAAATCTGTGGATGTTCCTTCTAAC AGTATGAGCAAGTTTATAGACATTCAGAGTAGAACCACTTGTGGATTGGAATAACCCAAAACTGCCGATTTCAGG GGCGGGTGCATTGTAGTTATTTTAAAATAGAAACTACCCCACCGACTCATCTTTCCTTCTCTAAGCACAAAG TGATTTGGTTATTTTGGTACCTGAGAACGTAACAGAATTAAAAGGCAGTTGCTGTGGAAACAGTTTGGGTTATTT GGGGGTTCTGTTGGCTTTTTAAAATTTTCTTTTTTGGATGTGTAAATTTATCAATGATGAGGTAAGTGCGCAATG CTAAGCTGTTTGCTCACGTGACTGCCAGCCCCATCGGAGTCTAAGCCGGCTTTCCTCTATTTTGGTTTATTTTTG TTGCAAACTGGGCTTTGTAGCGTCTGCCGTGTAACACCCTTCCTCTGATCGCACCGCCCCTCGCAGAGAGTGTAT GACTGAGTGTTGAGATTTTAAATAAAATTTAAAGT

MDSDASLVSSRPSSPEPDDLFLPARSKGSSGSAFTGGTVSSSTPSDCPPELSAELRGAMGSAGAHPGDKLGGSGF KSSSSTSSSTSSAAASSTKKDKKQMTEPELQQLRLKINSRERKRMHDLNIAMDGLREVMPYAHGPSVRKLSKIA TLLLARNYILMLTNSLEEMKRLVSEIYGGHHAGFHPSACGGLAHSAPLPAATAHPAAAAHAAHHPAVHHPILPPA AAAAAAAAAAAAAAAAVSSASLPGSGLPSVGSIRPPHGLLKSPSAAAAAPLGGGGGGGSGASGGFQHWGGMPCPCSMCQV PPPHHHVSAMGAGSLPRLTSDAK WO 2004/030615 PCT/US2003/028547

6379/6881 FIGURE 5889

ACCTCCCGAAAATGTCAGAATGAATTCTGTTAATTTCAAGAACATTCTACAGTGGGAGTCACCTGCTTTTGCCAA AGGGAACCTGACTTTCACAGCTCAGTACCTAAGTTATAGGATATTCCAAGATAAATGCATGAATACTACCTTGAC GGAATGTGATTTCTCAAGTCTTTCCAAGTATGGTGACCACACCTTGAGAGTCAGGGCTGAATTTGCAGATGAGCA TTCAGACTGGGTAAACATCACCTTCTGTCCTGTGGATGACACCATTATTGGACCCCCTGGAATGCAAGTAGAAGT TGTGTATAACTCATGGACTTATAATGTGCAATACTGGAAAAACGGTACTGATGAAAAGTTTCAAATTACTCCCCA GTATGACTTTGAGGTCCTCAGAAACCTGGAGCCATGGACAACTTATTGTGTTCAAGTTCGAGGGTTTCTTCCTGA TCGGAACAAGCTGGGGAATGGAGTGAGCCTGTCTGTGAGCAAACAACCCATGACGAAACGGTCCCCTCCTGGAT GGTGGCCGTCATCCTCATGGCCTCGGTCTTCATGGTCTGCCTGGCACTCCTCGGCTGCTTCGCCTTGCTGTGGTG CGTTTACAAGAAGACAAGTACGCCTTCTCCCCTAGGAATTCTCTTCCACAGCACCTGAAAGAGTTTTTTGGGCCA TCCTCATCATAACACACTTCTGTTTTTCTCCTTTCCATTGTCGGATGAGAATGATGTTTTTGACAAGCTAAGTGT CATTGCAGAAGACTCTGAGAGCGGCAAGCAGAATCCTGGTGACAGCTGCAGCCTCGGGACCCCGCCTGGGCAGGG GCCCCAAAGCTAGGCTCTGAGAAGGAAACACACTCGGCTGGGCACAGTGACGTACTCCATCTCACATCTGCCTCA CTTAGCCACCAGAGAGCTACATTTTAAAGGCTGTCTTGGCAAAAATACTCCATTTGGGAACTCACTGCCTTATAA AGGCTTTCATGATGTTTTCAGAAGTTGGCCACTGAGAGTGTAATTTTCAGCCTTTTATATCACTAAAATAAGATC ATGTTTTAATTGTGAGAAACAGGGCCGAGCACAGTGGCTCACGCCTGTAATACCAGCACCTTAGAGGTCGAGGCA GGCGGATCACTTGAGGTCAGGAGTTCAAGACCAGCCTGGCCAATATGGTGAAACCCAGTCTCTACTAAAAATACA AAAATTAGCTAGGCATGATGGCGCATGCCTATAATCCCAGCTACTCGAGTGCCTGAGGCAGGAGAATTGCATGAA CCCGGGAGGAGGAGGAGGTTGCAGTGAGCCGAGATAGCGGCACTGCACTCCAGCCTGGGTGACAAAGTGAGA CTCCATCTCAAAAAAAAAAAAAAAAATTGTGAGAAACAGAAATACTTAAAATGAGGAATAAGAATGGAGATG GTTTTATATGCTGCTGGTGCTCCATTAAAGTTTTACTCTGTGTTGC

GAATCACACTCAGGCAGTCTCTCTCTTTCTGAACAGAGATGAGCCCTAAGATACCTGGAAGATTTTGTTTTTAA CCTCACATTAAGGAAAGCACACATCACCTTGAAAGAGCTAAACTTGACGTCCTACAGAATTTCTCTAACTTAACA TTTATTTAATTCTCCTTTACATTGCCACCTTAACAATCCTTCCAGCTACGTATCTTAAAGGATGTGATGGAGAAG TTATCAACTGGTGTTTTCAGACCTCAGTTGGATGAACCCATTCCACTGTATGAGGCAAAAGTTTCCATGGAAGCT GTTCAGAAAAATCAAGGAAGAAAAAAGGTAGTGCACATCAGCGCCCTGGATCGCATACTTTCCAGAAGCGTCGCT GAACCTGGCGACTGGACTCTGGCCGAGGACCTGGCAGAAGCGCCAGGGCAGGGTCACCGCTGGGACAGTGGGCGT TGACGGCCACCCGGGATCGCCGCTGCGGGCTGCGTCTCGCGGGCTGCCCACTGCGCATGCTCCGCTCGGAACCGG GGGAAGTCTCTGTAGGGCGGCCGGCTACCCTCAGCCGCCGCGCTCATGGCCCTTTCGGTGCCCGGCTACTCACC GGGTTTCCGAAAGCCGCCCGAGGTAGTGCGGCTCCGACGGAAAAGGGCCCGGAGCCGTGGAGCTGCCCTCCCC GCCCCGTGAGCTGACGGAGCCGGCCGGCCGAGCCGCCCTGGTGGCGGGGCTGCCTCTTCGCCCTTTCCCTGC $\verb|CCGACCGCGGGTCGCCGCGGAGCCCCCGACGGGCCCGGGCCGGGGCCCGGAGCCCGGGGCCCCGGTCCCGTTTTTAGA||$ TTCTAATCAAGAAAATGATTTGCTATGGGAAGAGAAGTTTCCTGAAAGAACAACTGTTACTGAATTACCTCAGAC TTCACATGTATCATTCTCCGAGCCTGATATTCCGTCCTCAAAAAGTACTGAGTTACCTGTGGACTGGAGTATTAA AACGCGACTCCTTTTCACCTCTTCTCAACCCTTTACCTGGGCAGATCATTTGAAAGCACAGGAAGAAGCTCAAGG TCTTGTCCAGCATTGTAGGGCAACAGAAGTTACTTTGCCTAAAAGTATACAGGATCCCAAACTCTCCTCTGAGCT CCGTTGTACCTTCCAGCAGAGCCTTATCTATTGGCTCCACCCTGCTTTGTCTTGGCTACCACCTGTTCCCTCGTAT TGGAGCTGATAGAAAAATGGCTGGAAAGACAAGTCCTTGGTCAAATGATGCAACCCTGCAGCATGTTTTAATGAG TGACTGGTCTGTGAGCTTTACTTCTCTATATAATTTGCTGAAGACAAAACTTTGCCCCTATTTCTACGTTTGTAC CTATCAGTTTACTGTCCTGTTCCGAGCAGCAGGATTAGCTGGAAGTGACTTAATCACAGCTCTCATATCTCCAAC TAAGAAGGAGACAGCATCTGGAACAAGCTTGGGATATGGGGAGGAGCCAAGCCATCAGTGATGAGGATGAAGAGGA AAGTTTTTCCTGGCTGGAAGAGATGGGTGTGCAAGATAAAATTAAAAAGCCAGACATACTTTCTATCAAGCTGCG TAAAGAGAAACATGAAGTACAAATGGATCACAGACCTGAATCTGTTGTTTGGTAAAAGGAATCAACACCTTTAC CTTGTCCCCTGTTGCTTTCCGAGGTGCCACAATGCAAATGCTTAAGGCACGGAGTGTGAATGTGAAGACACAAGC TCTTTCTGGATACAGAGACCAATTTAGTTTGGAGATTACAGGTCCTATCATGCCTCATTCTCTGCATTCACTGAC CATGCTGCTCAAATCTTCACAGAGTGGATCTTTCTCTGCAGTACTGTATCCACACGAGCCAACTGCTGTATTTAA CATCTGCCTGCAAATGGACAAAGTACTTGATATGGAGGTTGTTCATAAGGAGCTTACTAACTGTGGTTTGCACCC TAACACTCTGGAGCAACTTAGTCAAATACCGTTACTTGGGAAATCATCTTTACGGAATGTGGTGCTGAGAGACTA CATTTATATTGGAGATCCTGAACACCAAAGTAAGCCTAAAAGGAATCTTTGAGGAAAAAAGCCTTCTAGCAAGG **AAATTCAAGATTCTTGAAGTTGAAGGAATATACTGAAATGTTTATAAACATAACTTTTACTACAGTAGCATCTAA** GGTTTTAAATGTGTTTTACTATTTTCAGATTAGATTTTTAGATATAAAGATGAAAAACTCAGATAACTCAAATGA GATATCTATATCCCTACAACCTAATTGTATATTGAGCAGAAACTGAATTAATATGCTTCCTTGCAAATTGGAAAT CACATAGCAGTTACCCCATGGCATTGTGACTAATGGCATCAGGGCAAAAATATGTTACTTTACGATTTACCTGTT

MALSVPGYSPGFRKPPEVVRLRRKRARSRGAAASPPRELTEPAARRAALVAGLPLRPFPAAGGRGGGSGGGPAAA RRNPFARLDNRPRVAAEPPDGPAREQPEAPVPFLDSNQENDLLWEEKFPERTTVTELPQTSHVSFSEPDIPSSKS TELPVDWSIKTRLLFTSSQPFTWADHLKAQEEAQGLVQHCRATEVTLPKSIQDPKLSSELRCTFQQSLIYWLHPA LSWLPLFPRIGADRKMAGKTSPWSNDATLQHVLMSDWSVSFTSLYNLLKTKLCPYFYVCTYQFTVLFRAAGLAGS DLITALISPTTRGLREAMRNEGIEFSLPLIKESGHKKETASGTSLGYGEEQAISDEDEEESFSWLEEMGVQDKIK KPDILSIKLRKEKHEVQMDHRPESVVLVKGINTFTLLNFLINSKSLVATSGPQAGLPPTLLSPVAFRGATMQMLK ARSVNVKTQALSGYRDQFSLEITGPIMPHSLHSLTMLLKSSQSGSFSAVLYPHEPTAVFNICLQMDKVLDMEVVH KELTNCGLHPNTLEQLSQIPLLGKSSLRNVVLRDYIYNWRS

MAAPAVSGLSRQVRCFSTSVVRPFAKLVRPPVQVYGIEGRYATALYSAASKQNKLEQVEKELLRVAQILKEPKVA ASVLNPYVKRSIKVKSLNDITAKERFSPLTTNLINLLAENGRLSNTQGVVSAFSTMMSVHRGEVPCTVTSASPLE EATLSELKTVLKSFLSQGQVLKLEAKTDPSILGGMIVRIGEKYVDMSVKTKIQKLGRAMREIV

 $\texttt{CGCGCGCCCCGTTCAGCC} \underline{\textbf{ATG}} \\ \texttt{TCGTCCGGCATCCATGTAGCGCTGGTGACTGGAGGCAACAAGGGCATCGGCTTG} \\$ GCCATCGTGCGCGACCTGTGCCGGCTGTTCTCGGGGGACGTGGTGCTCACGGCGCGGGACGTGACGCGGGGCCAG GCGGCCGTACAGCAGCTGCAGGCGGAGGGCCTGAGCCCGCGCTTCCACCAGCTGGACATCGACGATCTGCAGAGC ATCCGCGCCCTGCGCGACTTCCTGCGCAAGGAGTACGGGGGCCTGGACGTGCTGGTCAACAACGCGGGCATCGCC TTCAAGGTTGCTGATCCCACACCCTTTCATATTCAAGCTGAAGTGACGATGAAAACAAATTTCTTTGGTACCCGA GATGTGTGCACAGAATTACTCCCTCTAATAAAACCCCAAGGGAGAGTGGTGAACGTATCTAGCATCATGAGCGTC AGAGCCCTTAAAAGCTGCAGCCCAGAGCTGCAGCAGAAGTTCCGCAGTGAGACCATCACTGAGGAGGAGCTGGTG GAAGAAGGTGCAGAGACCCCTGTGTACTTGGCCCCTTTTGCCCCCAGATGCTGAGGGTCCCCATGGACAATTTGTT ${\tt TCAGAGAAGAGTIGAACAGTGG} \underline{{\tt TGA}} {\tt GCTGGGCTCACAGCTCCATCCATGGGCCCCATTTTGTACCTTGTCCTG}$ AGTTGGTCCAAAGGGCATTTACAATGTCATAAATATCCTTATATAAGAAAAAAATGATCTCTTATCAATTAGCA $\tt CTCACTAATGTACTACTAATTGAGCAACCTACGCACTCAGTTGACTACGTAAATCTGTCAGGTCTTTTGTGATTT$ **TTATAAGTG**

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MSSGIHVALVTGGNKGIGLAIVRDLCRLFSGDVVLTARDVTRGQAAVQQLQAEGLSPRFHQLDIDDLQSIRALRD FLRKEYGGLDVLVNNAGIAFKVADPTPFHIQAEVTMKTNFFGTRDVCTELLPLIKPQGRVVNVSSIMSVRALKSC SPELQQKFRSETITEEELVGLMNKFVEDTKKGVHQKEGWPSSAYGVTKIGVTVLSRIHARKLSEQRKGDKILLNA CCPGWVRTDMAGPKATKSPEEGAETPVYLALLPPDAEGPHGQFVSEKRVEQW

6386/6881 FIGURE 5896A

CTGAACTAGTTGCCAGTGATCTTGAAACGTGACAGTAACCAAGAGATAAATAGGTGACAATGACAGGAAAATTAG GACATGAGCAAATTACTTGATTTAAGTGAGCATTTTCCCCATCTGTACAGTGGAGATAACGATAATTGTGCCTGCT AAGAAGAATTGCTGTGAAGATTAGTGAAATAATGCATGTAAAACATTTGGTACAGTATGTGACACATAGTACAAA TAGTTTGCTAGGAAGATTGTTATTATTCTTCACTTGTGATATTGTGAAGTTTTCATACAGCAAATTGGACATCAT GAGATGGATTGATTAAATAAATAGATTTGAACTTCAAGGACTGGTAGTGTTCTTGCTTTGGAAAGAAGAAACTTG GTTTATCCTAATAATAGTAGGATAATAATGGTGAAGTGATAGGTACAAGTAATAGTGTTTATGATGCGCTGGTGA TGATAGGAAAAGAAAGCCATTATATGGGCAAGAGCTAGAAGTAATAAAATGGTGCATTTTTCAGTGATGTTTGGC GAAACTTTAGCACCAATCCCCCTTGCCCCCCATTGAAATACGTATTTTTAAAACATGGCTTTTGATAATGTGAGG GTTTTTTCCTTTTTGCGATTTAGCAGTGCTGATTGTGTATTGCAGTAGTTGTGAGAGCATTAGAAGCAGCAGTCG ATAGGAGGATGGAAGGTCTGGATGCCGCCTTGGGGAGTTAGGAGATTGGCAGACTTACCCTGTACCACTCTAGCC CTACTCCTTTGCCCAAGACAGAAACACACTGAGATGGATAGGAGAATATGAGCAGTTGATAGGAAAGTTCTCAGT GGAGTCAGGATTTAGGTTAGGCCAGGAGATTGAGAATATAACAGTTTGTGTATGATGAAATGGCATATTTCACAG GTAAACAGGTTAACTTAGAGTAGAGATGGTGAATATGTGAACCTGAGGAAAGGAAGAAATAGATTAAATTATCTG GAGAGAGGGAAAAGTCAGCAGAATGGGGACGAGAATCTTTCGGAGCTCAGTGTTCTGATAGGAGTTATTTCCTT GGGCATAGGTTCCAAGTATTTTCTAATATACCATAGAAGCCAGGAAAACTTTCTTCTGTTATCTCAAATGATTT ${\tt AATTACTGACTTGAGTTTGTTGTCTCCTTAGACTTGTGCACC} \underline{{\tt ATG}} {\tt GACAATTTTGCTGAGGGAGATTTCACTG}$ TGGCGGATTATGCCTTGTTAGAAGATTGCCCTCACGTGGATGATTGTGTCTTTGCTGCTGAATTTATGAGCAATG ATTTGGAATTTGACATCTGCAGTATATGGTGTAGTAAACCAATTTCTGTCCTGCAAGATTATTGCGATGCCATTA AAATAAACATCTTCTGGCCACTTCTGTTTCAACATCAAAACAGTTCCGTAATATCACGATTGCATCCCTGTGTGG ACGCCAACAATTCACGTGCTTCTGAGATAAATTTGAAGAAACTACAACATCTTGAGTTGATGGAAGATATTGTGG ATTTGGCAAAGAAGTTGCTAATGATTCATTCCTTATTGGAGGCTTATTGAGAATTGGTTGTAAAATAGAAAATA CAATTGACAATTGTTGGCCTATGTTAAGTATTTTCTTTACTGAATACAAGTACCACATAACTAAAATTGTAATGG TGAAAGGAAATGAAGAGTTTTCCAAAGAAAGATTTGATATAGCTATTATCTATTACACCAGAGCCATTGAATATA GACCTGAAAACTACCTTCTTTATGGTAACCGAGCTCTTTGTTTTCTTCGTACTGGACAGTTTAGAAATGCACTCG GTGATGGAAAGAGAGCCACTATTCTGAAGAACACTTGGCCAAAGGGTCATTATCGTTATTGTGATGCTCTTTCTA TGCTGGGGGAATATGACTGGGCCCTGCAAGCAAACATAAAAGCTCAAAAAACTCTGTAAAAATGACCCTGAGGGAA TCAAGGATCTAATTCAGCAGCATGTAAAGTTACAAAAACAAATAGAAGACCTACAAGGTCGAACAGCAAATAAGG ATCCAATTAAAGCCTTTTATGAAAACAGGGCCTACACCCTAGGAGTTTATCAGCACCTATATTTACTACTTCAC TTAACTTTGTGGAGAAGGAAAGAGATTTCAGAAAAATTAATCACGAAATGGCCAACGGTGGTAATCAGAATCTAA AGGTGGCGGATGAGGCGTTGAAGGTAGATGATTGTGACTGTCATCCTGAATTTTCACCACCATCAAGTCAGCCTC CAAAACATAAAGGAAAACAAAAATCTCGAAACAATGAATCAGAAAAGTTCAGTTCTAGTTCACCATTGACTTTAC CAGCAGATTTGAAGAACATCTTGGAGAAACAGTTTTCTAAATCTTCCAGAGCTGCACACCAGGATTTTGCTAATA TAATGAAAATGCTGAGAAGCTTAATTCAAGATGGCTATATGGCCTTATTGGAGCAGCGTTGCCGCAGCGCTGCAC AGGCCTTTACAGAGTTGCTGAACGGTTTAGATCCTCAAAAAATAAAGCAATTGAACCTGGCCATGATTAACTATG TTTTGGTCGTCTATGGACTTGCCATTTCTCTCTTGGAATAGGACAGCCTGAGGAATTATCTGAAGCCGAAAACC AGTTTAAGAGGATTATTGAACACTACCCCAGTGAGGGCCTTGATTGCTTGGCCTACTGTGGAATTGGAAAAGTGT ATTTGAAAAAAACAGATTTCTAGAAGCTCTCAATCACTTTGAGAAAGCAAGAACCTTGATTTATCGTCTTCCTG GAGTGTTAACTTGGCCCACGAGTAATGTGATTATTGAAGAGTCTCAGCCACAAAAAAATAAAGATGCTGTTAGAGA AATTTGTTGAAGAATGCAAGTTCCCTCCAGTGCCAGATGCCATTTGTTGCTATCAGAAGTGCCATGGATATTCTA AGATCCAGATATACATAACTGATCCAGACTTTAAGGGTTTTATACGCATCAGCTGTTGCCAGTACTGTAAAATAG AATTTCACATGAATTGCTGGAAGAAGTTAAAAACTACAACCTTTAATGATAAAATTGACAAGGATTTTCTACAAG

6387/6881 FIGURE 5896B

GAATATGTCTTACCCCTGACTGTGAAGGTGTCATTTCTAAGATTATCATCTTCAGCAGTGGTGGAAGTTAAAT GTGAATTTGAACACAAGGTCATAAAAGAAAAGGTTCCTCCAAGACCTATTCTGAAACAGAAATGTTCTAGCCTAG AGCGTTGTCAGTTCCTTGATGACAGAATTCTACAGTGTATAAAGCAGTATGCTGACAAGATTAAATCCGGCATAC AGAATACAGCCATGCTTCTCAAAGAATTGCTTTCTTGGAAAGTTTTGAGCACAGAAGACTATACAACCTGTTTTT CTAGCAGAAATTTTCTAAATGAAGCAGTGGACTATGTTATTCGCCACTTGATTCAAGAAAATAACAGAGTAAAGA CAAGAATATTTCTGCATGTTTTGAGTGAGCTTAAAGAAGTGGAGCCCAAATTAGCCGCCTGGATCCAAAAACTTA ATAGCTTTGGCTTAGATGCCACAGGAACTTTCTTTTCTCGTTATGGAGCATCTCTTAAACTGCTTGATTTTAGTA TCATGACTTTCCTCTGGAATGAGAAATATGGTCACAAACTAGACTCTATAGAAGGAAAGCAACTTGATTATTTCT CTGAGCCAGCATCATTGAAGGAAGCCCGTTGTTTAATATGGCTGCTAGAAGAACACAGAGACAAGTTCCCAGCAT TGCATAGTGCTTTAGATGAATTCTTTGATATAATGGACAGCCGCTGTACTGTTTAAGGAAACAAGATAGTGGTG AAGCACCGTTTAGTTCAACCAAGGTGAAAAACAAAAGCAAGAAAAAGAAGCCAAAGGATTCAAAGCCTATGTTAG TTGGGTCTGGAACAACTTCAGTAACTTCAAATAATGAGATCATCACTTCAAGTGAAGACCATAGCAATCGAAATT CAGATTCTGCAGGCCCATTTGCAGTGCCTGACCATCTTCGGCAAGATGTAGAAGAATTCGAAGCTCTCTATGACC AACACAGTAACGAATATGTTGTCCGCAATAAGAAGCTATGGGACATGAACCCAAAACAAAAATGTTCAACTCTAT ATGATTACTTCTCTCAGTTTTTGGAGGAACATGGTCCCTTGGACATGAGTAACAAGATGTTCTCTGCAGAATATG AGTTTTTCCCAGAAGAAACTCGACAGATACTAGAAAAAGCAGGAGGTTTAAAACCTTTTCTCTTGGGATGCCCTC ACATTAAAACAAAAGTAGAAGAAATTTCAAAAGCAGGGGAGTATGTACGAGTTAAACTACAACTGAATCCAGCTG CTAGGGAATTTAAACCAGATGTAAAGTCTAAACCAGTGTCAGATTCATCTTCAGCACCAGCTTTTGAAAATGTGA AACCCAAACCTGTGTCTGCAAATTCTCCCAAGCCAGCTTGTGAAGATGTGAAGGCCAAACCAGTATCCGACAATT CTTCTAGACAAGTTTCTGAGGATGGGCAACCCAAAGGGGTCTCTTCTAATTCTCCTAAACCAGGCTCTGAGGATG CAAATTACAAGCGAGTCTCCTGTAATTCCCCCAAACCGGTTCTTGAGGATGTGAAACCAACTTATTGGGCTCAAT CCCATTTGGTCACAGGATACTGTACGTATCTTCCTTTCCAGAGATTTGATATCACCCAGACACCGCCAGCATACA TAAACGTGTTACCAGGTTTGCCCCAGTACACCAGCATATATACACCCTTGGCCAGCCTTTCTCCTGAATATCAGC TACCAAGATCAGTACCAGTGGTGCCGTCTTTTGTAGCCAATGACAGAGCAGATAAAAATGCTGCTGCCTATTTTG AGGGTCATCATTTGAATGCTGAGAATGTTGCTGGTCACCAGATTGCCTCTGAAACACAGATCCTTGAGGGCTCTT TGCAGATGGTTGCCATACAGGTATCTTGGAACATAATACACCAAGAAGTCAATACTGAGCCATATAATCCTTTTG AGGAACGACAAGGGGAAATTTCACGGATTGAAAAGGAGCACCAAGTATTACAAGACCAACTTCAAGAAGTGTATG AAAATTATGAGCAGATAAAACTTAAGGGCTTAGAAGAGACCAGGGACCTGGAAGAGAAGTTGAAAAAGGCACTTAG AAGAAAACAAGATCTCAAAGACGGAATTAGATTGGTTCCTTCAAGATTTGGAAAGAGAAATTAAAAAATGGCAAC AGGAAAAAAAGAAATCCAAGAAAGACTAAAATCACTGAAGAAGAAAATTAAAAAGGTTTCAAATGCCAGTGAAA TGTATACCCAGAAAAATGATGGAAAGGAAAAGGAACATGAATTACATCTGGATCAGTCCCTTGAAATCAGCAACA GAGCTGTGGCTGCAGAGGTATCCGTACTTGAAAACTGGAAGGAGAGTGAAGTGTATAAGCTACAGATCATGGAGT CACAAGCAGAAGCCTTTCTGAAGAAGCTGGGGCTGATTAGCCGTGATCCTGCAGCATATCCTGACATGGAGTCTG ATATACGTTCATGGGAATTGTTTCTTTCTAATGTTACAAAAGAAATTGAGAAAGCAAAGTCTCAGTTTGAAGAAC AAATTAAGGCAATTAAAAATGGTTCTCGGCTCAGTGAACTTTCTAAAGTGCAGATTTCTGAGCTTTCATTTCCTG CCTGTAACACGGTTCATCCCGAGTTACTCCCTGAGTCTTCAGGCCACGATGGCCAAGGGCTTGTGACTTCTGCAA GCGACGTGACTGGAAACCACGCAGCACTTCACAGGGATCCTAGTGTTCTCTGCTGGTGATTCCCCAGGGGAGG CTCCTTCTGCGCTGTTGCCAGGGCCACCCCCTGGTCAGCCTGAAGCCACTCAGCTGACAGGGCCAAAACGGGCTG GCCAGGCAGCTCTGTCAGAACGAAGCCCTGTGGCTGATCGGAAGCAGCCTGTTCCTCCAGGACGTGCTGCGCGTT CAAGCCAGTCTCCAAAAAAGCCGTTCAATAGTATTATTGAGCACCTGTCAGTGGTATTCCCATGTTACAACAGCA TTGTCCAAAGAGTGACAGAACACATTCTAGATGAACAGAAAAAGAAAAAGCCAAACCCAGGAAAGGACAAGAGGA

6388/6881 FIGURE 5896C

CTTATGAGCCCAGCTCTGCCACCCCGTGACCAGGTCCTCCCAGGGCTCACCCTCGGTGGTTGTTGCACCATCAC CCAAAACCAAGGGGCAGAAAGCAGAAGATGTCCCTGTGAGGATTGCACTGGGTGCAAGTTCCTGTGAAATATGCC GGCTTAAAGGGCAGAGCGCTTGCCCGGCCTGCCAGGGTCGTGATCTCCTGACAGAAGAGTCACCTTCTGGAAGAG ${\tt GCTGGCCCAGTCAGAATCAGGAGCTGCCTTCCTGCTCTTCTAGG} \underline{{\tt TAG}} {\tt TCACACTTCACTAAAGTGTCATCCACCA}$ TGTGTCACAAAGCTAAATACATGGAAATCGTTAATATCGCTGATATTAAGTAATTTCCCCACTCTGAGTGAATAC TTTGATGATTGCCAACAGTGGCTAATAAAATGACGGCTACCACACTCATGGGTCACTGGGGCTGCGCAGGGCTCT TTGAGGTGGGTGGCTTCTTTTGGAAAGTACTATGAACGTCTCGAAGCAGTATTCTAGTGATAAGAATTCTTAACA TAGCCAAGCGCCCCACGTTTGTTCCCCACGTTTGTTCCCCTTTTCTGTTTGAAAAACCTGTTCTGGTAGCTCCAC AAGAGAGATGATACTGACTTTTTAAATTTTTTACAAGAGTCTGTATTCCTGATATGCCTATATTTTTCCTCAAAG ATTCTGCATTTTAAGGATGGGCATAAGCAAACTATATTTTAATAATTTATAGTTAATGTTAAAATATTGGCTGAT TTAGACCAAAAGATTCAAATCTCCTCTTTGTGAAATCCCATCTGCATTTGATTTTTTATTATTTTTATGTTCCCCC GTTAGATTGTTTTAAGTGTTTGCTTTTCATCTTTTATAGATGTAATCTGATTTTCAAAAATCATTAACACTTTTT AATTAGTATCGACTAAGACTTTTTCCCCCTGGAATCGAGGCTGTGTGTCCCTCATCCCAGCCCCCGGTTGGAGCC ACAAAAAGAGAAGCTGTGTCTTTAGACAACCCTGAGGTATCTGTGTTACAATCGTTCTGTGTTTGATATTTGTGT AAAGTATGCATGCAGTCTTGTACTGTGACCTAAGAACAAAACTGTAACTGCATTAGAAACCATGAAAAAATTAGA TATTGTTTTGTGACTTTTAGACAGTGGTAAATATAGAACCATGAATTCTGGTCACATTCCATTTCTCTCCAACAT GAAGGATCAAAAAATGTTTTTCAATGTGTTCTTTGTTCCACTGGAAACTTAGAGTCATGAGTTTATGAGCTGATT TGGTCACCTTCCTCTGCCTTTGTTCACTGTGAGTTCTGATGTCTTAGTGACTTAGTTCTTAGAAGCTCACGCCTT AGTTTGAAACAGATTCTCCACGGTGGTCCCCAAAACACTGTCTGCATATCCATAAGAATTGAGCGCTATGGGTGT TAACGTGCATGAGGATCAGTTTGCAGCAGCAAGTACAAAAGGAGAAGAGGAACATCCGTTGAATGAGTGTTTTT GTACATAACTTCAGATACTTGTGAACATGCCTTATATTTGTCCAACAACTGTCAGAATAAAGAACATTCTAAAAT GAG

PCT/US2003/028547

6389/6881 FIGURE 5897

MDNFAEGDFTVADYALLEDCPHVDDCVFAAEFMSNDYVRVTQLYCDGVGVQYKDYIQSERNLEFDICSIWCSKPI SVLODYCDAIKINIFWPLLFQHQNSSVISRLHPCVDANNSRASEINLKKLQHLELMEDIVDLAKKVANDSFLIGG LLRIGCKIENKILAMEEALNWIKYAGDVTILTKLGSIDNCWPMLSIFFTEYKYHITKIVMEDCNLLEELKTQSCM DCIEEGELMKMKGNEEFSKERFDIAIIYYTRAIEYRPENYLLYGNRALCFLRTGQFRNALGDGKRATILKNTWPK ${\tt GHYRYCDALSMLGEYDWALQANIKAQKLCKNDPEGIKDLIQQHVKLQKQIEDLQGRTANKDPIKAFYENRAYTPR}$ SLSAPIFTTSLNFVEKERDFRKINHEMANGGNQNLKVADEALKVDDCDCHPEFSPPSSQPPKHKGKQKSRNNESE KFSSSSPLTLPADLKNILEKQFSKSSRAAHQDFANIMKMLRSLIQDGYMALLEQRCRSAAQAFTELLNGLDPQKI KQLNLAMINYVLVVYGLAISLLGIGQPEELSEAENQFKRIIEHYPSEGLDCLAYCGIGKVYLKKNRFLEALNHFE KARTLIYRLPGVLTWPTSNVIIEESQPQKIKMLLEKFVEECKFPPVPDAICCYQKCHGYSKIQIYITDPDFKGFI RISCCQYCKIEFHMNCWKKLKTTTFNDKIDKDFLQGICLTPDCEGVISKIIIFSSGGEVKCEFEHKVIKEKVPPR PILKQKCSSLEKLRLKEDKKLKRKIQKKEAKKLAQERMEEDLRESNPPKNEEQKETVDNVQRCQFLDDRILQCIK QYADKIKSGIQNTAMLLKELLSWKVLSTEDYTTCFSSRNFLNEAVDYVIRHLIQENNRVKTRIFLHVLSELKEVE PKLAAWIQKLNSFGLDATGTFFSRYGASLKLLDFSIMTFLWNEKYGHKLDSIEGKQLDYFSEPASLKEARCLIWL LEEHRDKFPALHSALDEFFDIMDSRCTVLRKQDSGEAPFSSTKVKNKSKKKKPKDSKPMLVGSGTTSVTSNNEII TSSEDHSNRNSDSAGPFAVPDHLRQDVEEFEALYDQHSNEYVVRNKKLWDMNPKQKCSTLYDYFSQFLEEHGPLD MSNKMFSAEYEFFPEETRQILEKAGGLKPFLLGCPRFVVIDNCIALKKVASRLKKKRKKKNIKTKVEEISKAGEY VRVKLQLNPAAREFKPDVKSKPVSDSSSAPAFENVKPKPVSANSPKPACEDVKAKPVSDNSSRQVSEDGQPKGVS SNSPKPGSEDANYKRVSCNSPKPVLEDVKPTYWAQSHLVTGYCTYLPFQRFDITQTPPAYINVLPGLPQYTSIYT PLASLSPEYQLPRSVPVVPSFVANDRADKNAAAYFEGHHLNAENVAGHQIASETQILEGSLGISVKSHCSTGDAH TVLSESNRNDEHCGNSNNKCEVIPESTSAVTNIPHVQMVAIQVSWNIIHQEVNTEPYNPFEERQGEISRIEKEHQ VLQDQLQEVYENYEQIKLKGLEETRDLEEKLKRHLEENKISKTELDWFLQDLEREIKKWQQEKKEIQERLKSLKK KIKKVSNASEMYTQKNDGKEKEHELHLDQSLEISNTLTNEKMKIEEYIKKGKEDYEESHQRAVAAEVSVLENWKE SEVYKLQIMESQAEAFLKKLGLISRDPAAYPDMESDIRSWELFLSNVTKEIEKAKSQFEEQIKAIKNGSRLSELS ${\tt KVQISELSFPACNTVHPELLPESSGHDGQGLVTSASDVTGNHAALHRDPSVFSAGDSPGEAPSALLPGPPPGQPE}$ ${\tt ATQLTGPKRAGQAALSERSPVADRKQPVPPGRAARSSQSPKKPFNSIIEHLSVVFPCYNSTELAGFIKKVRSKNK}$ NSLSGLSIDEIVQRVTEHILDEQKKKKPNPGKDKRTYEPSSATPVTRSSQGSPSVVVAPSPKTKGQKAEDVPVRI ALGASSCEICHEVFKSKNVRVLKCGHKYHKGCFKQWLKGQSACPACQGRDLLTEESPSGRGWPSQNQELPSCSSR WO 2004/030615 PCT/US2003/028547

6390/6881 FIGURE 5898

MAATFFGEVVKAPCRAGTEDEEEEEGRRETPEDREVRLQLARKREVRLLRRQTKTSLEVSLLEKYPCSKFIIAI GNNAVAFLSSFVMNSGVWEEVGCAKLWNEWCRTTDTTHLSSTEAFCVFYHLKSNPSVFLCQCSCYVAEDQQYQWL EKVFGSCPRKNMQITILTCRHVTDYKTSESTGSLPSPFLRALKTQNFKDSACCPLLEQPNIVHDLPAAVLSYCQV WKIPAILYLCYTDVMKLDLITVEAFKPILSTRSLKGLVKNIPQSTEILKKLMTTNEIQSNIYT

CGCGGCGGCTGGCGTCGGGAAAGTACAGTAAAAAGTCCGAGTGCAGCCGCCGGGCGCAGG<u>ATG</u>GGATCCGGCTCC TCCAGCTACCGGCCCAAGGCCATCTACCTGGACATCGATGGACGCATTCAGAAGGTAATCTTCAGCAAGTACTGC ACCGACGACGCCATGGTCTCCATCGACCCCACCATGCCCGCGAATTCAGAACGCACTCCGTACAAAGTGAGACCT GTGGCCATCAAGCAACTCTCCGCTGGTGTCGAGGACAAGAGAACCACAAGCCGTGGCCAGTCTGCTGAGAGACCA CTGAGGGACAGACGGGTTGTGGGCCTGGAGCAGCCCCGGAGGGAAGGAGCATTTGAAAGTGGACAGGTAGAGCCC AGGCCCAGAGAGCCCCAGGGCTGCTACCAGGAAGGCCAGCGCATCCCTCCAGAGAGAAGAATTAATCCAGAGC GTGCTGCCCAGGTTGCAGAGCAGTTCTCAAGAGCATTCAAAATCAATGAACTGAAAGCTGAAGTTGCAAATCAC TTGGCTGTCCTAGAGAAACGCGTGGAATTGGAAGGACTAAAAGTGGTGGAGATTGAGAAATGCAAGAGTGACATT AAGAAGATGAGGGAGGAGCTGGCGGCCAGAAGCAGCAGGACCAACTGCCCCTGTAAGTACAGTTTTTTTGGATAAC CACAAGAAGTTGACTCCTCGACGCGATGTTCCCACTTACCCCAAGTACCTGCTCTCTCCAGAGACCATCGAGGCC CTGCGGAAGCCGACCTTTGACGTCTGGCTTTGGGAGCCCAATGAGATGCTGAGCTGCCTGGAGCACATGTACCAC GACCTCGGGCTGGTCAGGGACTTCAGCATCAACCCTGTCACCCTCAGGAGGTGGCTGTTCTGTGTCCACGACAAC TACAGAACACCCCTTCCACAACTTCCGGCACTGCTTCTGCGTGGCCCAGATGATGTACAGCATGGTCTGGCTC TGCAGTCTCCAGGAGAAGTTCTCACAAACGGATATCCTGATCCTAATGACAGCGGCCATCTGCCACGATCTGGAC CATCCCGGCTACAACACCGTACCAGATCAATGCCCGCACAGAGCTGGCGGTCCGCTACAATGACATCTCACCG CTGGAGAACCACCACTGCGCCGTGGCCTTCCAGATCCTCGCCGAGCCTGAGTGCAACATCTTCTCCAACATCCCA CCTGATGGGTTCAAGCAGATCCGACAGGGAATGATCACATTAATCTTGGCCACTGACATGGCAAGACATGCAGAA ATTATGGATTCTTTCAAAGAGAAAATGGAGAATTTTGACTACAGCAACGAGGAGCACATGACCCTGCTGAAGATG TTAGAGGAATATTTTATGCAGAGCGACCGTGAGAAGTCAGAAGGCCTTCCTGTGGCACCGTTCATGGACCGAGAC AAAGTGACCAAGGCCACAGCCCAGATTGGGTTCATCAAGTTTGTCCTGATCCCAATGTTTGAAACAGTGACCAAG CTCTTCCCCATGGTTGAGGAGATCATGCTGCAGCCACTTTGGGAATCCCGAGATCGCTACGAGGAGCTGAAGCGG ATAGATGACGCCATGAAAGAGTTACAGAAGAAGACTGACAGCTTGACGTCTGGGGCCACCGAGAAGTCCAGAGAG AGAAGCAGAGATGTGAAAAACAGTGAAGGAGACTGTGCC<u>TGA</u>GGAAAGCGGGGGGCGTGGCTGCAGTTCTGGACG GGCTGGCCGAGCTGCGCGGGATCCTTGTGCAGGGAAGAGCTGCCCTGGGCACCTGGCACCACAAGACCATGTTTT

MGSGSSSYRPKAIYLDIDGRIQKVIFSKYCNSSDIMDLFCIATGLPRNTTISLLTTDDAMVSIDPTMPANSERTP YKVRPVAIKQLSAGVEDKRTTSRGQSAERPLRDRRVVGLEQPRREGAFESGQVEPRPREPQGCYQEGQRIPPERE ELIQSVLAQVAEQFSRAFKINELKAEVANHLAVLEKRVELEGLKVVEIEKCKSDIKKMREELAARSSRTNCPCKY SFLDNHKKLTPRRDVPTYPKYLLSPETIEALRKPTFDVWLWEPNEMLSCLEHMYHDLGLVRDFSINPVTLRRWLF CVHDNYRNNPFHNFRHCFCVAQMMYSMVWLCSLQEKFSQTDILILMTAAICHDLDHPGYNNTYQINARTELAVRY NDISPLENHHCAVAFQILAEPECNIFSNIPPDGFKQIRQGMITLILATDMARHAEIMDSFKEKMENFDYSNEEHM TLLKMILIKCCDISNEVRPMEVAEPWVDCLLEEYFMQSDREKSEGLPVAPFMDRDKVTKATAQIGFIKFVLIPMF ETVTKLFPMVEEIMLQPLWESRDRYEELKRIDDAMKELQKKTDSLTSGATEKSRERSRDVKNSEGDCA

WO 2004/030615 PCT/US2003/028547

6394/6881 FIGURE **5902**

CCACGAGACATTGGCCGGCGCGGCCTCCGCCCCCGCCTCTCCGCCAATCACCGCCGCCTGCTCCCCTCGCCGT GGGTCCCCGCGAGGCCGCCACCCCGGGGTCGCCGTCTCCGCCTCGCCGCAGTCGGGGGCAGCCGCTCGCCCCTCTT TTCCATGTATCCGTCCAGGATCCCATGACAGATTCTGTTGTCACGTCTCCTTACAGAGTTTGAGCGGTGCTGAAC TGTCAGCACCATCTGTCCGGTCCCAGCATGCCTTCTGAGACCCCCCAGGCAGAAGTGGGGCCCACAGGCTGCCCC CACCGCTCAGGGCCACACTCGGCGAAGGGGAGCCTGGAGAAGGGGTCCCCAGAGGATAAGGAAGCCAAGGAGCCC CACACTGCCCGGCAAAATCTCCAAAAATCTTGCCAGATATTCTGAAGAAAATCGGGGGACACCCCTATGGTCAGA AGCGTGAAGGACCGCATCAGCCTGCGGATGATTGAGGATGCTGAGCGCGACGGGACGCTGAAGCCCGGGGACACG ATTATCGAGCCGACATCCGGGAACACCGGGATCGGGCTGGCCTGGCTGCGGCAGTGAGGGGCTATCGCTGCATC ATCGTGATGCCAGAGAAGATGAGCTCCGAGAAGGTGGACGTGCTGCGGGCACTGGGGGCTGAGATTGTGAGGACG CCCACCAATGCCAGGTTCGACTCCCCGGAGTCACACGTGGGGGGTGGCCTGGCGGCTGAAGAACGAAATCCCCAAT TCTCACATCCTAGACCAGTACCGCAACGCCAGCAACCCCCTGGCTCACTACGACACCACCGCTGATGAGATCCTG CAGCAGTGTGATGGGAAGCTGGACATGCTGGTGGCTTCAGTGGGCACGGCGCGCCACCATCACGGGCATTGCCAGG AAGCTGAAGGAGAAGTGTCCTGGATGCAGGATCATTGGGGTGGATCCCGAAGGGTCCATCCTCGCAGAGCCGGAG GAGCTGAACCAGACGAGCAGACAACCTACGAGGTGGAAGGGATCGGCTACGACTTCATCCCCACGGTGCTGGAC AGGACGGTGGTGGACAAGTGGTTCAAGAGCAACGATGAGGAGGCGTTCACCTTTGCCCGCATGCTGATCGCGCAA GAGGGGCTGCTGTGCGGTGCCAGTGCCAGCACGGTGGCCGTGAAGGCCGCGCAGGAGCTGCAGGAG GGCCAGCGCTGCGTGGTCATTCTGCCCGACTCAGTGCGGAACTACATGACCAAGTTCCTGAGCGACAGGTGGATG CTGCAGAAGGGCTTTCTGAAGGAGGAGGACCTCACGGAGAAGAAGCCCTGGTGGTGGCACCTCCGTGTTCAGGAG CTGGGCCTGTCAGCCCCGCTGACCGTGCTCCCGACCATCACCTGTGGGCACACCATCGAGATCCTCCGGGAGAAG GGCTTCGACCAGGCGCCCGTGGTGGATGAGGCGGGGGTAATCCTGGGAATGGTGACGCTTGGGAACATGCTCTCG TCCCTGCTTGCCGGGAAGGTGCAGCCGTCAGACCAAGTTGGCAAAGTCATCTACAAGCAGTTCAAACAGATCCGC CTCACGGACACGCTGGGCAGGCTCTCGCACATCCTGGAGATGGACCACTTCGCCCTGGTGGTGCACGAGCAGATC CAGTACCACAGCACCGGGAAGTCCAGTCAGCGGCAGATGGTGTTCGGGGTGGTCACCGCCATTGACTTGCTGAAC TTCGTGGCCGCCCAGGAGCGGACCAGAAGTGAAGTCCGGAGCGCTGGGCGGATGTTTCACCAAGGAAATATTGA GAGAGAAGTCGGCCAGGTAGGATGAACACAGGCAATGACTGCGCAGAGTGGATTAAAGGCAAAAGAGAGAAGAGT CCAGGAAGGGGCGGGAGAAGCCTGGGTGGCTCAGCATCCTCCACGGGCTGCGCCGTCTGCTCGGGGCTGAGCTG TGAACAATCAGCGGCATTTAGTACATCCAGAAAGTTGTGTAGGCACCACCTCTGTCACGTTCTGGAACATTCTGT CATCACCCCGTGAAGCAATCATTTCCCCTCCCGTCTTCCTCCCCTGGCAACTGCTGATCGACTTTGTGTCTC TGTTGTCTAAAATAGGTTTTCCCTGTTCTGGACATTTCATATAAATGGAATCACAC

MAEYLASIFGTEKDKVNCSFYFKIGACRHGDRCSRLHNKPTFSQTIALLNIYRNPQNSSQSADGLRCAVSDVEMQ EHYDEFFEEVFTEMEEKYGEVEEMNVCDNLGDHLVGNVYVKFRREEDAEKAVIDLNNRWFNGQPIHAELSPVTDF REACCRQYEMGECTRGGFCNFMHLKPISRELRRELYGRRRKKHRSRSRSRERRSRSRDRGRGGGGGGGGGGGRE RDRRRSRDRERSGRF

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MGLLAFLKTQFVLHLLVGFVFVVSGLVINFVQLCTLALWPVSKQLYRRLNCRLAYSLWSQLVMLLEWWSCTECTL FTDQATVERFGKEHAVIILNHNFEIDFLCGWTMCERFGVLGSSKVLAKKELLYVPLIGWTWYFLEIVFCKRKWEE DRDTVVEGLRRLSDYPEYMWFLLYCEGTRFTETKHRVSMEVAAAKGLPVLKYHLLPRTKGFTTAVKCLRGTVAAV YDVTLNFRGNKNPSLLGILYGKKYEADMCVRRFPLEDIPLDEKEAAQWLHKLYQEKDALQEIYNQKGMFPGEQFK PARRPWTLLNFLSWATILLSPLFSFVLGVFASGSPLLILTFLGFVGAASFGVRRLIGVTEIEKGSSYGNQEFKKK

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GCGACGCGGCGCGGGGGGGGGGGGGGGCCGGGGGTGGACCTGGA GAAGCTGCGGCGTCGGGCGGGCGAAGGCCATCGGCGTCCTGACCAGCGGCGGCGACGGCGAAGGTCCCCTGAC AAGCCCACCAGGCCCCCTGCTGAGATGGCTGTGACCCTGGGCTGACCCGCCCAGTGGCACATTGACTCCGCCTGG AGCTGGGGAGACCAGAGAGGCCCTGTGGTTGGACGGTGGCCTGGGTGCGCTGCTCCTGCCCTGCCCTGC GAGAGCGGATGAGAAGCATGTGTAACCAGGGTAGAGGTCGAGAGTCCTCTCGTGGGGGGTCTCCATGTTCAAGGGA GCTGCCGAGGCTTGAGCAGGAGCCCCCAGCAGGAAACTGGCTTTGCCAAGGCCCCGGTGGGACAGACTGTTTCT TTCACTGCAGTCCTGGGAGCCGAGGGCAAGGGGACAGGAAAGAGGAAGTGACCTCAGAGCCTGGTGGCACCAGCA TCATGTCCAGGCTGGGGGGCATGAACGCTGCTGTCCGGGCTGTGACGCGCATGGGCATTTATGTGGGTGCCAAAG TCTTCCTCATCTACGAGGGCCTATGAGGGCCTCGTGGAGGGGAGGTGAGAACATCAAGCAGGCCAACTGGCTGAGCG GCCGGGCAGCGGCCTACAACCTGGTCCAGCACGGCATCACCAACCTGTGCGTCATCGGCGGGGATGGCAGCCTTA CAGGTGCCAACATCTTCCGCAGCGAGTGGGGCAGCCTGCTGGAGGAGCTGGTGGCGGAAGGTAAGATCTCAGAGA CTACAGCCCGGACCTACTCGCACCTGAACATCGCGGGCCTAGTGGGCTCCATCGATAACGACTTCTGCGGCACCG ACATGACCATCGGCACGGACTCGGCCCTCCACCGCATCATGGAGGTCATCGATGCCATCACCACCACCACTGCCCAGA GCCACCAGAGGACCTTCGTGCTGGAAGTGATGGGCCGGCACTGCGGGTACCTGGCGCTGGTATCTGCACTGGCCT CAGGGGCCGACTGGCTGTTCATCCCCGAGGCTCCACCCGAGGACGGCTGGGAGAACTTCATGTGTGAGAGGCTGG GTGAGACTCGGAGCCGTGGGTCCCGACTGAACATCATCATCATCGCTGAGGGTGCCATTGACCGCAACGGGAAGC CCATCTCGTCCAGCTACGTGAAGGACCTGGTGGTTCAGAGGCTGGGCTTCGACACCCGTGTAACTGTGCTGGGCC ACGTGCAGCGGGGAGGGACGCCCTCTGCCTTCGACCGGATCCTGAGCAGCAAGATGGGCATGGAGGCGGTGATGG TCATGGAGTGCGTGCAGATGACCAAGGAAGTGCAGAAAGCCATGGATGACAAGAGGTTTGACGAGGCCACCCAGC TCCGTGGTGGGAGCTTCGAGAACAACTGGAACATTTACAAGCTCCTCGCCCACCAGAAGCCCCCCAAGGAGAAGT CTAACTTCTCCCTGGCCATCCTGAATGTGGGGGCCCCGGCGGCTGCATGAATGCGGCCGTGCGCTCGGCGGTGC GGACCGGCATCTCCCATGGACACACAGTATACGTGGTGCACGATGGCTTCGAAGGCCTAGCCAAGGGTCAGGTGC AAGAAGTAGGCTGGCACGACGTGGCCGGCTGGTTGGGGGCGTGGTGGCTCCATGCTGGGGGACCAAGAGGACCCTGC CCAAGGGCCAGCTGGAGTCCATTGTGGAGAACATCCGCATCTATGGTATTCACGCCCTGCTGGTGGTCGGTGGGT TTGAGGCCTATGAAGGGGTGCTGCAGCTGGTGGAGGCTCGCGGGGGGCTACGAGGAGCTCTGCATCGTCATGTGTG TCATCCCAGCCACCATCAGCAACAACGTCCCTGGCACCGACTTCAGCCTGGGCTCCGACACTGCTGTAAATGCCG CCATGGAGAGCTGTGACCGCATCAAACAGTCTGCCTCGGGGACCAAGCGCCGTGTGTTCATCGTGGAGACCATGG GGGGTTACTGTGGCTACCTGGCCACCGTGACTGGCATTGCTGTGGGGGGCCGACGCCGCCTACGTCTTCGAGGACC TGGTGCTGCGGAACGAGAAGTGCCATGACTACTACACCACGGAGTTCCTGTACAACCTGTACTCATCAGAGGGCA AGGGCGTCTTCGACTGCAGGACCAATGTCCTGGGCCACCTGCAGCAGGGTGGCGCTCCAACCCCTTTGACCGGA ACTATGGGACCAAGCTGGGGGTGAAGGCCATGCTGTGGTTGTCGGAGAAGCTGCGCGAGGTTTACCGCAAGGGAC GGGTGTTCGCCAATGCCCCAGACTCGGCCTGCGTGATCGGCCTGAAGAAGAAGGCGGTGGCCTTCAGCCCCGTCA CTGAGCTCAAGAAAGACACTGATTTCGAGCACCGCATGCCACGGGAGCAGTGGTGGCTGAGCCTGCGGCTCATGC TGAAGATGCTGGCACAATACCGCATCAGTATGGCCGCCTACGTGTCAGGGGAGCTGGAGCACGTGACCCGCCGCA CTCCAGCAGGAGGACAGAGTGCCCTGGGGCATCCACCTTCCTGCCCAGGGGACGTGGCGCTGTCGGTGTTTGGAG GCTGCTGCCCCTGGCTTTGGCGCCCCATGGGCCCTCAGCGTCTCCCCATGCTGGGCTCACTACATGGGCCAGCC CTTGCTCTACCTGGCCGGTAGGCTGCCGCCCTAGGTTGTTGAGAGGGGGATGCCCCTGGCCCTCACT GTGACCTGCTCCTGCCCACGTGCAGCACCTGTCACCTTTTCTAGAAATAAAATCACCCTGACTGTGGGGTGCATC **GGTCTCCGG**

GTGGCACGGGCAGGGCCCAGTGCACAGGGATCTGGGCATGGCGAGGGGATGAGAAGCTGTGGATACAAGCCCAGG ACATGGGGTGGCCCCGCGGGGGGTGGGAAGGCTGGCAGATGTTGGGTGTGGGTACCACCCCCTGCAGGCGTCCT ${\tt GGCGGCCGGGTCAGGCTGGATTGGACGTCTGGGTTCCCATGCGTGCCTCCACCCGCTACCAAGGTGGCCAACCCT}$ CCCTTGAGCTGGATGCCGGCCACGTGCTTTGCTGCACGGGCTGGCCTCGTGTTGTGTTGGGGGTCTCGCA CCTTCTGTGGAAGGTGCCCTGCCTGGCATGCGCGGTGTCTGCCTCATGGCTGAGCTTCCATCGGGCCGTGTG CCTGTGACCAGCCTCCTGGGCTGTCACGGCTGCGCTGTGGCTGTACGCCGTGGCGCTGCAGGGCTGTGCATGG TGTGACCCGAATCCCTTCCAGGAGCTTCGAGAACAACTGGAACATTTACAAGCTCCTCGCCCACCAGAAGCCCCC CAAGGAGAAGTCTAACTTCTCCCTGGCCATCCTGAATGTGGGGGCCCCGGCGGCTGGCATGAATGCGGCCGTGCG GGGTCAGGTGCAAGAAGTAGGCTGGCACGACGTGGCCGGCTGGTTGGGGCGTGGTGGCTCCATGCTGGGGACCAA GAGGACCCTGCCCAAGGGCCAGCTGGAGTCCATTGTGGAGAACATCCGCATCTATGGTATTCACGCCCTGCTGGT GGTCGGTGGGTTTGAGGCCTATGAAGGGGTGCTGCAGCTGGTGGAGGCTCGCGGGGCGCTACGAGGAGCTCTGCAT CGTCATGTGTGTCATCCCAGCCACCATCAGCAACAACGTCCCTGGCACCGACTTCAGCCTGGGCTCCGACACTGC TGTAAATGCCGCCATGGAGAGCTGTGACCGCATCAAACAGTCTGCCTCGGGGACCAAGCGCCGTGTGTTCATCGT GGAGACCATGGGGGGTTACTGTGGCTACCTGGCCACCGTGACTGCCATTGCTGTGGGGGCCGACGCCGCCTACGT TCAGAGGGGCCTGGTGCTGCGGAACGAGAAGTGCCATGACTACTACACCACGGAGTTCCTGTACAACCTGTACTC ATCAGAGGGCAAGGGCGTCTTCGACTGCAGGACCAATGTCCTGGGCCACCTGCAGCAGGGTGGCGCTCCAACCCC CTTTGACCGGAACTATGGGACCAAGCTGGGGGTGAAGGCCATGCTGTGGTTGTCGGAGAAGCTGCGCGAGGTTTA CCGCAAGGGACGGGTGTTCGCCAATGCCCCAGACTCGGCCTGCGTGATCGGCCTGAAGAAGAAGAAGGCGGTGGCCTT CAGCCCGTCACTGAGCTCAAGAAAGACACTGATTTCGAGCACCGCATGCCACGGGAGCAGTGGTGGCTGAGCCT GCGGCTCATGCTGAAGATGCTGGCACAATACCGCATCAGTATGGCCGCCTACGTGTCAGGGGAGCTGGAGCACGT CCTGCCAGGCCCTCCAGCAGGAGGACAGAGTGCCCTGGGGGCATCCACCTTCCTGCCCAGGGGACGTGGCGCTGTC GGTGTTTGGAGGCTGCCCCCTGGCTTTGGCGCCCCATGGGCCCTCAGCGTCTCCCCATGCTGGGCTCACTAC ATGGGCCAGCCCTTGCTCTACCTGGCCGGTAGGCTGCTGGCGCCTAGGTTGTTGAGAGGGGGGATGCCCCTGGC CCTGCCTCACTGTGACCTGCTCCTGCCCACGTGCAGCACCTGTCACCTTTTCTAGAAATAAAATCACCCTGACTG TGGGGTGCATCGGTCTCCGG

TGACGCGGAAGATGGTTCTGACCCGAGCCAAGGCCTCGGAGCTGCACAGCGTGCGCAAGCTCAACTGCTGGGGCA GCCGCCTCACAGATATCTCCATTTGCCAGGAGATGCCCAGCCTGGAGGTGATCACGCTCAGTGTCAACAGCATCT GCCCCACCGCTACCGCATGACCGTGCTGCGCACCCTGCCGCGCCTACAGAAGCTGGACAACCAGGCTGTGACGG GCGCCCCAAGCTATGCTGCACACTGAGCTCCCTCAGCTCCGCTGAGACTGGCCGGGACCCGCTGGACAGCG CAGCCAGGGATGCCTCGAGCAGCCACAGGGGCAGGAACGTCCTGACTGCATCCTGCTGCTGCTGCGGGAGCTGG ATGCAGAGGGGCTGGAGGCCGTGCAGCAGACTGTGGGCAGCCGGCTGCAGGCCCTGCGTGGGGAAGAGGTGCAGG AGCACGCCGAGTGACCGCAGGACCTGAACGCCGCTCCAGCCTCCACGGGGACCCCAGCGTCTTCCCCAGCCCCCG GGAGCTGGAGGGTGGCTGCCATGGCCGCAGCCCCGGCCCCACACAAAAGCCTCCCCGGTTTGCCACATCGGCCGA GGGCAGGAGTGGGTGTTAGGTACTGGCTAACCGGGGCGGTGGAGATGCCTGTCTACACCAGTCCTGTCCCCAGGA CTCCCCTTCTGTGGTCTGGAGGTTCTAGGCTGGCCTGGGCTCTTAAAGGGAGGATTTTGCAGGCTGTCCTCCCTA ATAAAAGATTTTCCCAAGGTTGATCTGGAGGTGACGTTTCCCAAGGCATGGTTGTGACAGTCTTCCTGAAAGCAA GGGCCGTTTCTCCACAGAATGAGGAGGTCTTCACGGATGGCTTTGCCGATTCCAGCCCTTGGTCCTTGGATAGAT TCCTGTGAAGAACTGCAGGAGGGCCCTCAGCTGTGAGGTTGTGGATGAACAGGCCTGTTCGCCCTGGGGTCCGGG CGCAAGTCTTATGAGGATGCCACAATCTGGGCAGTGACCCGTGGCCCTGGGGACCTTCCTAGTGCCCCCCAAAAC CAAGGAAGCATTCACGTGAGATGGGGAGTCAGCCTTCCAGCTGGTGTGTAGGAAAGCCAGGTCCCTGGGCCCTTG TCCCATGTGGGGTTGAGATCCAGGATCTCCATGAGATATTCCCATCCTCCGCCGAGCGGTGATGCGTGACCGTGTG TGCAGGCCGCTGTTCTCCCAAGCTCGGGGCCATGCCGTGCCACCGTCACCAGAGCCAGCTGCAGCACTGGGGCAG CCACTGTCGCCGGACTTGGGGAAGCCCAGGGTGAAGACAGTCACTCATCCGTGCAAGCTCTCCAGAAGGGATGCA AGCTCTCCAGAAGGGGTGTGATCTCTGAGCAGTGGGGAGTGGAGTCACCACTCGGGACATAGAGGGTGGACAGTT CAGGCCTGTGTCTGCCTCCTTGGGACTGTGGAGTGGGTGCCCTCAGTAAAGCGCTTTGTTGGAATGGTAAAAAAA ΑΑΑΑΑΑΑΑΑΑΑΑ

MKLTRKMVLTRAKASELHSVRKLNCWGSRLTDISICQEMPSLEVITLSVNSISTLEPVSRCQRLSELYLRRNRIP SLAELFYLKGLPRLRVLWLAENPCCGTSPHRYRMTVLRTLPRLQKLDNQAVTEEELSRALSEGEEITAAPEREGT GHGGPKLCCTLSSLSSAAETGRDPLDSEEEATSGAQDERGLKPPSRGQFPSLSARDASSSHRGRNVLTAILLLLR ELDAEGLEAVQQTVGSRLQALRGEEVQEHAE

CGCGCGGCTGAGGCGAGGTCGCTCGGCGCAGCTGTTGCGGGGGCC<u>ATG</u>GCGGGGACCGCGCTCAAGAGGCTGATGG AATGGGAGGCATTGATCATGGGCCCAGAAGACACCTGCTTTGAGTTTTGGTGTTTTTCCTGCCATCCTGAGTTTCC CACTTGATTACCCGTTAAGTCCCCCAAAGATGAGATTTACCTGTGAGATGTTTCATCCCAACATCTACCCTGATG GGAGAGTCTGCATTTCCATCCTCCACGCGCCAGGCGATGACCCCATGGGCTACGAGAGCAGCGCGGAGCGGTGGA GTCCTGTGCAGAGTGTGGAGAAGATCCTGCTGTCGGTGGTGAGCATGCTGGCAGAGCCCAATGACGAAAGTGGAG CTAACGTGGATGCGTCCAAAATGTGGCGCGATGACCGGGAGCAGTTCTATAAGATTGCCAAGCAGATCGTCCAGA AGTCTCTGGGACTG**TGA**GACCTGGCCTCGCACAGGCGCGCACACACCGCCAAGCAGCTCAGCATTCTCCCCCGGC TTTCAAACCTTTCCTACTTCAAACAGGCTTCTCTTCTGAAATGATGACTTAATGTCGAATATTGACAGCTTACTG CAGTTTTACAGTATTCCTCACAAAGGGCTTCAGGTAGATTATCAGAGCTGTCAGCACTACCTCTCCCCGCTGAAA CCAGCAGTTCATGGCTTCCTGTGGATTCCCTCCCTCCCTGGAGTGTTGAGGGGGTTGTACCTGCCAGACTTCCAG GGGACGATGGAATACCCAGAACGCTCCTTCTGAAGAAATGGGGCCCTGTAGCTGCAGCACAGGGGAAGGGCCCGG ATACTTCCAGGAAATGCTTTTTTGAAGTGTGAATTAATAAGAAATGGGGTAAATAGAAAAGAAATTTATTGCTGA TTGGCCAGGTGCGTGGTTCGTGCCTGTAATCCCAGCTCTTTGGGAGGCCAAGGCAGGTAGATCACAAGGTCAGG AAATTGAGACCATCCTGGCTAATACAGTGAAACCCCATGTCTGCTAAAATTACAAAAAATTAGCTGGGCGTGGTG GTGCACGCCTGTAGTCTCAGCTACTCAGGAGGCTGAGGCAGGAGAATCGCTTGAACCCGGGAGGCAGAGGTAGCA TTATTGCTGATCACAAGGACAGACAGTTTTTTCCCGACCATACTCATCAAAGATTTACGTTTGTATATTAGTAAC TAGTGCATTACTAGAGCAGGTGCAGGTGAGGTCTTTAAAGTTTCAATGAAAGTTTCTTCTGGATCTACAGAAAAA ATTTTTTTTTTCAATCTAAAAACTGGAAATTCTAGGGTTTTTGTACATTTTGGATGCACTGGGAATTTATTAGC ACAAAATCATTCTTTGCAACTCAAAATTCAGAAGGGACTCTACCATATCTTAGCTCAGAGCACAGAGGAGTGCCT TATCCCCACACTTGACTGGGCTGTGGAGGTGGGCCATGTGGGCCCCTGGGCCCAGGCTGGGGACAGAGCCCTTGTT TTGTGACTTAGGATTTTGATGTGGTTCCCATGTTCTCTAACAGGGCCAGCTGAGCAGCACAGGCCAGGAGGCCAC AGTGTAAGCAATAACAGATCTGCCACATGCAGAAGCAAATATCAGGCCTGTCGCACACGGGCGGCATTTAAATAG TCCATAATGGATCGTGGTCTGTGACTGAACCCACACAGAGTGTCATGGGTGACAGTTTCTGGTTGAAGTAGCT CCACGCCTGGCTTCTGTGGACAGCAGATTCTTTTCCTTCTCACAAGGGGCTCATTTAAAATTTGGAGGCTGGGTG GTCCCAGCTACTCTGAAGACTGAGGCAGGAGAATGGCGTGAACCCAGGÂGGCGGAGCTTGCAGTGAGCTGAGATC GGCAAGAACTCGTATTTGGAAGGAGATGGGGGAAAGGAGCGGTATTATACCTATGTTGTATTTGCAGGCAAATGA GATGGAGCCCTCTCTGTAAAGAAGAGTCATTTGTGCAAGTAGACGGGGTCTGTGGGTGCAGGCCCTGGAGGGGCA TTCATTTGTATTTATAAATGAAAAACAATCCCATGGTGTCCCTGTTGTGTGGGGAACCTAATGACTGTTGAA ATAAAGTTCTGTGTTTTCCCTGCCCTGC

MAGTALKRIMAEYKQITINPPEGIVAGPMNEENFFEWEALIMGPEDTCFEFGVFPAILSFPLDYPLSPPKMRFTC EMFHPNIYPDGRVCISILHAPGDDPMGYESSAERWSPVQSVEKILISVVSMLAEPNDESGANVDASKMWRDDREQ FYKIAKQIVQKSLGL

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AGCCACGTGACCCCCGTGCCGGCCAACGGGTGCGCCGGGATTTGGGGGATAAAGCGCGGCCCCGCGCACAGTTGC GGCGGGAGAGCGGGGGCCGAGAGCGTGACTCGCCCGCTCCGCGCTGCTTCCCCGCGCCGCCCCCCGCGCCG CTCGCGCAGCCATGTCCGAGGAGAAGCCCAAGGAGGGTGTGAAGACAGAAGAATGACCACATCAACCTGAAGGTGG CCGGGCAGGACGGCTCCGTGGTGCAGTTCAAGATCAAGAGGCACACGCCGCTGAGCAAGCTGATGAAGGCCTACT CAGCACAGCTGGAGATGGAGGACGAGGACACCATCGACGTGTTCCAGCAGCAGACGGGAGGTGTGCCGGAGAGCA GCCTGGCAGGGCACAGTTTCTAGAGGGCCCGTCCCCAGCCCGGGCCGTCCATCCTCGCATTGCTGTTGAATGGTG AGCACGTGACCATGCCGACCACAAAGGTGTCTGCGGAAACTCGAGGACATTCACCACGATGATTTTCCTCTCTTT GATGTACTTCAAGTGCAACTCAAAACTATATCTGCAGGGATGAATCTGTAACTTAAATTGGGCCAATCAGAATTG TTATCTTTGTTCAGGTAAAATGAGTTGCAAGATATTGTGGGTACTTTTGTGTGCTCATTTGTGTTTTCCCCCCCT CCTACAACATTTTTTTAACCCCAAAATTATAGCCTGAATGTTCGCTTTTAGTCTGGCCAGGGATCTGACTCCTGA GTTGGTTGCCTCTCCCCTGCTCACTCCAGTCACATAGAGAATTGGTGTTTCCCGCAGTGGGGATGCAGCTGTTGG ACAGGTATTGGGGGCAAGGTTGGTAGGGAGGACAGACTGTCACTTGCTGTTACAGGCACAGGTGATTAAAATGCT AAATATTGCAAATTTAAGCTTTGTCAGTATATGGAAAAGTTGAAGGGAAAATACTGGAATGCTTCTTCAAAGGTT AAAAAATAACCGAGTCTTTTGGTAATTTGACCCCACGTGCTCTCTGGCCCTCAAGCATGTAACCTCGGGGTCTGA GGCCCAGGACCCACCCCCTGCCACCCCTCCCACCCCACTCCTGCTCAGTACCTGGCGTTGGTACACAGGCAAG GATTGGCACAACCAAAATTGGCCTTTTTCTCCCTCTTAATATTGAAGAAATTCCCACATTTCTCATTTGGTAATG GTGTTGTGGCCTCAGATTTCTTCTAGTATTTGCTTCTGATGATGATTATGGTCTATACATAAAAAAGTAAGACT AAGTATTGCTGAATTTGCAGTTATGTTGTCGTGTATAAGAGCTACTTCCAAGTGTGGTTACAAATGAACCCATGG AATGATGACTTCATGTTCTTCTCGTGGGTTTGTGCCGTGCTGCTTTCCAAATAGGTATTGAATTTATGCATTAGT CTGGTGATTTCAGTTCTGTGAAATATTTTGGGATCTATACCAATTAAACATTTTCATAGTTCTGCCTATTGTCCT TCCCTGAGGCTCCATTGCTGCTGGTGGCCATTCTCTGCCTTTTTACAGTCACCTGAACAATGACCCATCATCTC TCTGTTGTGTTTATTCACCAATTTGTACATTATTTGTTGTCCTTTACTACTGTAAACAGTAAATATAGTTTGGT

 ${\tt MSEEKPKEGVKTENDHINLKVAGQDGSVVQFKIKRHTPLSKLMKAYCERQGLSMRQIRFRFDGQPINETDTPAQLE} \\ {\tt EMEDEDTIDVFQQQTGGVPESSLAGHSF}$

GCCCGCGGCCGACGCCGTACTGGAGGTTGCGCCTCGGTGGCGCCGCCTGCTCCTGCTCCTATCCCGGTGGCC GCCGCGCAGGAGCCTCCCGGAGCTGCTTGTTCTCAGAACACAAACCAGAACCTGTGAAGAGTGCCTGAAGAACGTC TCCTGTCTTTGGTGCAACACTAACAAGGCTTGTCTGGACTACCCAGTTACAAGCGTCTTGCCACCGGCTTCCCTT TGTAAATTGAGCTCTGCACGCTGGGGAGTTTGTTGGGTGAACTTTGAGGCGCTGATCATCACCATGTCGGTAGTC GGGGGAACCCTCCTCCTGGGCATTGCCATCTGCTGCTGCTGCTGCAGGAGGAAGAGGAGGAGCCGGAAGCCGGAC AGGAGTGAGGAGAAGGCCATGCGTGAGCGGGAGGAGAGGCCGGATACGGCAGGAGGAACGGAGAGCAGAGATGAAG ACAAGACATGATGAAATCAGAAAAAAATATGGCCTGTTTAAAGAAGAAAACCCGTATGCTAGATTTGAAAACAAC <u>TAA</u>AGCGCTCCAGCACATCAGTCCCGACGCTTCCTGTGAGGTGCACGCTCCGCAGCCCAGCCCAGCCCGGGAGACC ACGTGGCCATTGCGGTCTCCTGACCTTGGCCAGTGAACCTGCCAGCCTTCCAGGACAGGCGGCCGGAGAGCTGCC CCTGAAGGACAGTCCTCTGCTCTTGCAGACTGGTGACCTTCTATTCCCTGTTCATCTCTGTTTCTAGATTTAGTC ACTTGAAATAAGAAATCTTTGGGGTTTGGGCTTTTTTATACTCTTCTCAGTTTGTGAAACGCTAACTGCACACGA AGCCGCCTGACGGCACCCAGCGCTGTGGCTGTCATTCTCCCAGGGCAGAACCCTGCGTTTCTCTCTGTCCACTAA CAAGCTTCACACGCAACACAGGGAAGTCGGTTTGACTTTTGTCATGAGGAGAACTGACCAGCCCTCATCATTCCC CATAAAACCACGGACAGCGTCTGTGTGCGCATCTTGAGTCTTCACACCTGTTGACTCACACGGCTTTTGCTGATG ACACGGGGCTCCAGTACACAGTCTGATAAGGACTTAACGTCCTAACCTCAATTGTATTAAATAGCATTGGGGAAT AGCTAAACCTTTTTAAAAAATTTATTGGATTTTCCTCCCTGCTTAAAAGATTTCACCAGAAAACCTTCATATAA AAATTCAGGCCCTTTTTGGACAATTTTTAAAATTTGTATCTTTACTAGAACATGAGAATCTTTTTCCCTTGGAAG CTTGAATTATAAATGTGGTGTTTGGCCTGCCTCAGCAGCACCAGTTGACTGCTCGTGTGCCAGCGGTGTGGGGAG GACGGGGCAGGACGCTGCAGCTCTCCCAGCCCTGTTGGCATCCTCAGTGCCTGCAGGCCTCTCGCTGCTTG GGCCCGGCTCTGGGCCACGTGCCCCGGAAGCAGGTGTGTCCAGAGTCAGCTGAGGGCTCTCCCCACACCACCAG CAGGCGCTGGTGCTCCTCTGCCTCATGGGACCAGTCCAGCTTCCAGCCGCTCTGGCTCGAGGGTGGTCTGAGCA CTTCCTTCTGAGTGGGCTTCTCTGGGAGCTCTCCAGTGGCACTGCTGGACCTGCCCACGTTTCTGTAAAATCAGG ATACGTGGCTTTAGTAAGCAGACCAAGCGCTTCGTGGCAGGGAAAGCAGCGTGCGGGGAAGTCACTGAAAAGTGC TGCCTAAGGAAGTTTGGAAATAGTCCCCGTTCCAGATTGCCTTGAATTTTAAAACATTTTGCTTTGGGAAAGTAG GTCAGCAGCACCTAAGATCAAGGATGCGTTCCATTTTCACACTTCACAGTCATGAAAACTGAGAAGACTGTCTTC AGCGTGAACTAAAGTTCACAGGCAGATCACTGATCCAGAACACTTCAAGAACTCGTCAAACAGCTCGATAAGCCT TTTTGACTGTGTACATCTGTACCGGGAATAACATTCCTAGGCTGAAATTTCCACAAAGAATAGAACCTGTACCCA GTTCTTCAGGCTGATTTCCCTGACCTCTTGGGCATTTGTATTTGTAGTAAAGTATTGCAGAGATTCCTAAGTATT TTATAGCAGCCATCAAAATTGGACTTTGTATTGTTTATTCATAAAAGACACTTGGTAATAGACTTCAGTGAACTC TGTATGAATGCAGTAGTGTGCGTGCAAAATCCGCTTCCTGAGCGTAGGGTGCTGAGCTGGCGCTAGGGCTCGGTT TTTTTCTGAAATACACTAAGAGCAGCCACAAAACTGTAACCTCAAGGAAACCATAAAGCTTGGAGTGCCTTAAT TTTTAACCAGTTTCCAATAAAACGGTTTACTACCTGA

 ${\tt MAPGVARGPTPYWRLRLGGAALLLLLIPVAAAQEPPGAACSQNTNKTCEECLKNVSCLWCNTNKACLDYPVTSVLPPASLCKLSSARWGVCWVNFEALIITMSVVGGTLLLGIAICCCCCCRRKRSRKPDRSEEKAMREREERRIRQEERRAEMKTRHDEIRKKYGLFKEENPYARFENN$

TGTCAGGACTTTACGACCCGCGCCTCCAGCTGAGGTTTCTAGACGTGACCCAGGGCAGACTGGTAGCAAAGCCCC CACGCCCAGCCAGGAGCACCGCCGAGGACTCCAGCACACCGAGGGACATGCTGGGCCTGCGCCCCCCACTGCTCG AATGCATCGAGTCGGGGCCCGGCTGCACCTGGTGCCAGAAGCTGAACTTCACAGGGCCGGGGGATCCTGACTCCA TTCGCTGCGACACCCGGCCACAGCTGCTCATGAGGGGCTGTGCGGCTGACGACATCATGGACCCCACAAGCCTCG CTGAAACCCAGGAAGACCACAATGGGGGCCAGAAGCAGCTGTCCCCACAAAAAGTGACGCTTTACCTGCGACCAG GCCAGGCAGCAGCGTTCAACGTGACCTTCCGGCGGGCCAAGGGCTACCCCATCGACCTGTACTATCTGATGGACC TCTCCTACTCCATGCTTGATGACCTCAGGAATGTCAAGAAGCTAGGTGGCGACCTGCTCCGGGCCCTCAACGAGA TCACCGAGTCCGGCCGCATTGGCTTCGGGTCCTTCGTGGACAAGACCGTGCTGCCGTTCGTGAACACGCACCCTG ATAAGCTGCGAAACCCATGCCCCAACAAGGAGAAAGAGTGCCAGCCCCGTTTGCCTTCAGGCACGTGCTGAAGC TGACCAACAACTCCAACCAGTTTCAGACCGAGGTCGGGAAGCAGCTGATTTCCGGAAACCTGGATGCACCCGAGG GTGGGCTGGACGCCATGATGCAGGTCGCCGCCTGCCCGGAGGAAATCGGCTGGCGCAACGTCACGCGGCTGCTGG TGTTTGCCACTGATGACGGCTTCCATTTCGCGGGCGACGGGAAGCTGGGCGCCATCCTGACCCCCAACGACGGCC GCTGTCACCTGGAGGACAACTTGTACAAGAGGAGCAACGAATTCGACTACCCATCGGTGGGCCAGCTGGCGCACA AGCTGGCTGAAAACAACATCCAGCCCATCTTCGCGGTGACCAGTAGGATGGTGAAGACCTACGAGAAACTCACCG AGATCATCCCCAAGTCAGCCGTGGGGGAGCTGTCTGAGGACTCCAGCAATGTGGTCCAACTCATTAAGAATGCTT ACAATAAACTCTCCTCCAGGGTCTTCCTGGATCACAACGCCCTCCCCGACACCCTGAAAGTCACCTACGACTCCT TCTGCAGCAATGGAGTGACGCACAGGAACCAGCCCAGAGGTGACTGTGATGGCGTGCAGATCAATGTCCCGATCA CCTTCCAGGTGAAGGTCACGGCCACAGAGTGCATCCAGGAGCAGTCGTTTGTCATCCGGGCGCTGGGCTTCACGG ACATAGTGACCGTGCAGGTTCTTCCCCAGTGTGAGTGCCGGTGCCGGGACCAGAGCAGAGCCGCAGCCTCTGCC ATGGCAAGGGCTTCTTGGAGTGCGGCATCTGCAGGTGTGACACTGGCTACATTGGGAAAAACTGTGAGTGCCAGA CACAGGGCCGGAGCAGCCAGGAGCTGGAAGGAAGCTGCCGGAAGGACAACACTCCATCATCTGCTCAGGGCTGG GGGACTGTGTCTGCGGGCAGTGCCTGTGCCACACCAGCGACGTCCCCGGCAAGCTGATATACGGGCAGTACTGCG AGTGTGACACCATCAACTGTGAGCGCTACAACGGCCAGGTCTGCGGGGGCCCCGGGGAGGGGGCTCTGCTTCTGCG GGAAGTGCCGCTGCCACCCGGGCTTTGAGGGCTCAGCGTGCCAGTGCGAGAGGACCACTGAGGGCTGCCTGAACC CGCGGCGTGTTGAGTGTAGTGGTCGTGGCCGGTGCCGCTGCAACGTATGCGAGTGCCATTCAGGCTACCAGCTGC CTCTGTGCCAGGAGTGCCCCGGCTGCCCCTCACCCTGTGGCAAGTACATCTCCTGCGCCGAGTGCCTGAAGTTCG AAAAGGGCCCCTTTGGGAAGAACTGCAGCGCGGGGTGTCCGGGCCTGCAGCTGTCGAACAACCCCGTGAAGGGCA GGACCTGCAAGGAGGGGCTCAGAGGGCTGCTGGGTGGCCTACACGCTGGAGCAGCAGGACGGGATGGACCGCT ACCTCATCTATGTGGATGAGAGCCGAGAGTGTGTGGCAGGCCCCAACATCGCCGCCATCGTCGGGGGCACCGTGG CAGGCATCGTGCTGATCGGCATTCTCCTGCTGGTCATCTGGAAGGCTCTGATCCACCTGAGCGACCTCCGGGAGT ACAGGCGCTTTGAGAAGGAGAAGCTCAAGTCCCAGTGGAACAATGATAATCCCCTTTTCAAGAGCGCCACCACGA CGGTCATGAACCCCAAGTTTGCTGAGAGTTAGGAGCACTTGGTGAAGACAAGGCCGTCAGGACCCACCATGTCTG CCCCATCACGCGGCCGAGACATGGCTTGCCACAGCTCTTGAGGATGTCACCAATTAACCAGAAATCCAGTTATTT TCCGCCCTCAAAATGACAGCCATGGCCGGCCGGGTGCTTCTGGGGGGCTCGTCGGGGGGACAGCTCCACTCTGACT

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6416/6881 FIGURE **5924A**

AGCTCCAGCCGCACTGCCCCGATGCCTCCCTACCCCTGTGGCTGCCACATCCTGCTGCTGCTCTTCTGCTGCCTG GCGGCTGCCCGGCCAACCTGCAACCTGAACTGGCTTTGGTTCAATAATGAGGACACCAGCCATGCAGCTACC GGTTCCACAGAGCCAGCGACAGCCCCTGGCAGCCCTGAGCCACCCTCAGAGCTGCTGGAAGATGGCCAGGACACC CCCACTTCTGCCGAGAGCCCGGACGCCAGAGGAGAACATTGCCGGTGTCGGAGCCGAGATCCTGAACGTGGCC AAAGGCATCCGGAGCTTCGTCCAGCTGTGGAATGACACTGTCCCCACTGAGAGCTTGGCCAGGGCGGAAACCCTG GTCCTGGAGACTCCTGTGGGCCCCCTTGCCCTCGCTGGGCCTTCCAGCACCCCCCAGGAGAATGGGACCACTCTC TGGCCCAGCCGTGGCATTCCTAGCTCTCCGGGCGCCCCACACACCGAGGCTGGCACCTTGCCTGCACCCCACCCCA TCGCCTCCCTGGGCAGGCCCTGGGCACCACTCACGGGGCCCTCAGTGCCACCATCTTCAGAGCGCATC AGCGAGGAGGTGGGGCTGCTGCAGCTCCTTGGGGACCCCCCGCCCCAGCAGGTCACCCAGACGGATGACCCCGAC GTCGGGCTGGCCTACGTCTTTGGGCCAGATGCCAACAGTGGCCAAGTGGCCCGGTACCACTTCCCCAGCCTCTTC TCGGCGCAGGCCATGGTCTTGCTGGGCGTGAAGCTCTCTGGGGTGCAGGACGGCCACGAGACATCTCCCTGCTC TACACAGAACCAGGTGCAGGCCAGACCCACACAGCCGCCAGCTTCCGGCTCCCCGCCTTCGTCGGCCAGTGGACA CACTTAGCCCTCAGTGTGGCAGGTGGCTTTGTGGCCCTCTACGTGGACTGTGAGGAGTTCCAGAGAATGCCGCTT GCTCGGTCCTCACGGGGCCTGGAGCTGGAGCCTGGCGCGGGCTCTTCGTGGCTCAGGCGGGGGGAGCGGACCCT GACAAGTTCCAGGGGGTGATCGCTGAGCTGAAGGTGCGCAGGGACCCCCAGGTGAGCCCCATGCACTGGAC GAGGAAGGCGATGACTCAGATGGGGCATCCGGAGACTCTGGCAGCGGGCTCGGGGACGCCCGGGAGCTTCTCAGG GAGGAGACGGGCGCCCTAAAACCCAGGCTCCCCGCGCCACCCCCGTCACCACGCCACCCTTGGCTGGAGGC AGCAGCACGGAAGATTCCAGAAGTGAAGAAGTCGAGGAGCAGACCACGGTGGCTTCGTTAGGAGCTCAGACACTT CCTGGCTCAGATTCTGTCTCCACGTGGGACGGGAGTGTCCGGACCCCTGGGGGCCCGTGAAAGAGGGCGGCCTG CCGGGCGACCCCGGTGAAGACGGAAAGCCGGGCGACACCGGGCCACAAGGCTTCCCCGGGACTCCAGGGGACGTA GCCCTGCGGGGTCCTCGAGGCTTCCCTGGACCTCCCGGACCCCCGGTGTCCCAGGCCTGCCCGGCGAGCCAGGC CGCTTTGGGGTGAACAGCTCCGACGTCCCAGGACCCGCCGCCTTCCTGGTGTGCCTGGGCGCGAGGGTCCCCCC AGCCTGGGTGAAGCAGGCGCCCCAGGACATAAGGGGAGCAAGGGAGCCCCCGGTCCTGCTGGTGCTCGTGGGGAG AGCGGCCTGGCAGGAGCCCCCGGACCTGCTGGACCACCAGGCCCCCTGGGCCCCCTGGGCCCCCAGGACCAGGA CTCCCCGCTGGATTTGATGACATGGAAGGCTCCGGGGGGCCCTTCTGGTCAACAGCCCGAAGCGCTGATGGGCCA CAGGGACCTCCCGGCCTGCCGGGACTTAAGGGGGATCCTGGCGTGCCTGGGCTGCCGGGGGCGAAGGGAAGGTT GGAGCAGATGGAGTCCCCGGGTTCCCCGGCCTCCTGGCAGAGAGGGCATTGCTGGGCCCCAGGGGCCAAAGGGA GACAGAGGCAGCCGGGGAGAAAAGGGAGATCCAGGGAAGGACGGAGTCGGGCAGCCGGGCCTCCCTGGCCCCCCC GGACCCCGGGACCTGTGGTCTACGTGTCGGAGCAGGACGGATCCGTCCTGAGCGTGCCGGGACCTGAGGGCCGG CCGGGTTTCGCAGGCTTTCCCGGACCTGCAGGACCCAAGGGCAACCTGGGCTCTAAGGGCGAACGAGGCTCCCCG GGACCCAAGGGTGAGAAGGGTGAACCGGGCAGCATCTTCAGCCCCGACGGCGGTGCCCTGGGCCCTGCCCAGAAA GGAGCCAAGGTGAGGCCGGGCTTCCGAGGACCCCCGGGTCCATACGGACGCCGGGGTACAAGGGAGAGATTGG CTTTCCTGGACGGCCGGGTCGCCCCGGGATGAACGGATTGAAAGGAGAGAAAGGGGAGCCGGGAGATGCCAGCCT TGGATTTGGCATGAGGGGAATGCCCGGCCCCCAGGACCTCCAGGGCCCCCAGGCCCTCCAGGGACTCCTGTTTA CGACAGCAATGTGTTTGCTGAGTCCAGCCGCCCCGGGCCTCCAGGATTGCCAGGGAATCAGGGCCCTCCAGGACC CAAGGGCGCCAAAGGAGAAGTGGGCCCCCCGGACCACCAGGGCAGTTTCCGTTTGACTTTCTTCAGTTGGAGGC TTTCTTCGGCTCCAGCCTGCCCGGCCCCCCGGCCCCCCAGGCCCCCCGGGCCCACGTGGCTACCCTGGGATTCC AGGTCCCAAGGGAGAGAGCATCCGGGGCCAGCCCGGCCCACCTGGACCTCAGGGACCCCCCGGCATCGGCTACGA GGGGCGCCAGGGCCCTCCCGGCCCCCAGGCCCCCCAGGGCCCCTTCATTTCCTGGCCCTCACAGGCAGACTAT CAGCGTTCCCGGCCCTCCGGGCCCCCTGGGCCCCCTGGAACCATGGGCGCCTCCTCAGGGGTGAG

6417/6881 FIGURE 5924B

GCAGGAGGAGCTCTACGTCCGCGTGCAGAACGGGTTCCGGAAGGTCCAGCTGGAGGCCCGGACACCACTCCCACG AGGGACGGACAATGAAGTGGCCGCCTTGCAGCCCCCGTGGTGCAGCTGCACGACAGCAACCCCTACCCGCGGCG CCACAGCCACCGCGACTTCCAGCCGGTGCTCCACCTGGTTGCGCTCAACAGCCCCCTGTCAGGCGGCATGCGGGG CATCCGCGGGGCCGACTTCCAGTGCTTCCAGCAGGCGCGGGCCGTGGGGGCTGGCGGCACCTTCCGCGCCCTTCCT GTCCTCGCGCCTGCAGGACCTGTACAGCATCGTGCGCCGTGCCGACCGCGCAGCCGTGCCCATCGTCAACCTCAA GGACGAGCTGCTGTTTCCCAGCTGGGAGGCTCTGTTCTCAGGCTCTGAGGGTCCGCTGAAGCCCGGGGCACGCAT GAACAGCTTCATGACTGCCTCCAAGTAGCCACCGCCTGGATGCGGATGGCCGGAGAGGACCGGCGGCTCGGAGGA AGCCCCACCGTGGGCAGGGAGCGGCCAGCCCCTGGCCCAGGACCTGGCTGCCATACTTTCCTGTATAGT TCACGTTTCATGTAATCCTCAAGAAATAAAAGGAAGCCAAAGAGTGTATTTTTTTAAAAGTTTAAAACAGAAGCC GCCCTGTGCAACCTCTTGGCCTGATCAGACCACGGCTCGATTTCTCCAGGATTTCCTGCTTTGGGAAGCCGTGCT CGCCCCAGCAGGTGCTGACTTCATCTCCCACCTAGCAGCACCGTTCTGTGCACAAAACCCAGACCTGTTAGCAGA CAGGCCCCGTGAGGCAATGGGAGCTGAGGCCACACTCAGCACAAGGCCATCTGGGCTCCTCCAGGGTGTGTGCTC GCCCTGCGGTAGATGGGAGGGAGGCTCAGGTCCCTGGGGCTAGGGGGAGCCCCTTCTGCTCAGCTCTGGGCCATT CTCCACAGCAACCCCAGGCTGAAGCAGGTTCCCAAGCTCAGAGGCGCACTGTGACCCCCAGCTCCGGCCTGTCCT ${\tt CCAACACCAAGCAGCAGCCTGGGGCTGGCCTCCCAAATGAGCCATGAGATGATACATCCAAAGCAGACAGCTC}$ ${\tt CACTGCCCATGGACAGGCTGGCTCCAGATGCAGGGCAGTCATTGGCTGTCTCCTAGGAAACCCATATCCTTACCC}$ TCCTTGGGACTGAAGGGGAACCCCGGGGTGCCCACAGGCCGCCCTGCGGGTGAACAAAGCAGCCACGAGGTGCAA CAAGGTCCTCTGTCAGTCACAGCCACCCCTGAGATCCGGCAACATCAACCCGAGTCATTCGTTCTGTGGAGGGAC AAGTGGACTCAGGGCAGCCCAGGCTGACCACAGCACACCCCACCTGCCTCAGGACTGCGACGAAACCG GTGGGGCTGGTTCTGTAATTGTGTGTGATGTGAAGCCAATTCAGACAGGCAAATAAAAGTGACCTTTTACACTG

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6419/6881 FIGURE 5926A

CACTCTGGCTGGGAGCAGAGGCAGCCTCGGTCTCTGGGCGGCGGCGGCGGCCCACTCTGCCCTGGCCGCCTGT GTGGTGACCGCAGGCCCCAGACATGAGGGCGGCCCGTGCTGCTGCTGCTGCTGCTGCAGGCCTGCTGGACAGC CGCGCAGGATGAGCCGGAGACCCCGAGGGCCGTGGCCTTCCAGGACTGCCCCGTGGACCTGTTCTTTGTGCTGGA CACCTCTGAGAGCGTGGCCCTGAGGCTGAAGCCCTACGGGGCCCTCGTGGACAAAGTCAAGTCCTTCACCAAGCG CTTCATCGACAACCTGAGGGACAGGTACTACCGCTGTGACCGAAACCTGGTGTGGAACGCAGGCGCGCTGCACTA CAGTGACGAGGTGGAGATCATCCAAGGCCTCACGCGCATGCCTGGCGGCCGCGACGCACTCAAAAGCAGCGTGGA CGCGGTCAAGTACTTTGGGAAGGGCACCTACACCGACTGCGCTATCAAGAAGGGGCTGGAGCAGCTCCTCGTGGG GGGCTCCCACCTGAAGGAGAATAAGTACCTGATTGTGGTGACCGACGGGCACCCCCTGGAGGGCTACAAGGAACC CTGTGGGGGGCTGGAGGATGCTGTGAACGAGGCCAAGCACCTGGGCGTCAAAGTCTTCTCGGTGGCCATCACACC CGACCACCTGGAGCCGCGTCTGAGCATCATCGCCACGGACCACACGTACCGGCGCAACTTCACGGCGGCTGACTG GGGCCAGAGCCGCGACGCAGAGGACGCCATCAGCCAGACCATCGACACCATCGTGGACATGATCAAAAATAACGT GGAGCAAGTGTGCTGCTCCTTCGAATGCCAGCCTGCAAGAGGACCTCCGGGGCTCCGGGGCCGACCCCGGCTTTGA GGGAGAACGAGGCAAGCCGGGGCTCCCAGGAGAGAAGGGAGAAGCCGGAGATCCTGGAAGACCCGGGGACCTCGG ACCTGTTGGGTACCAGGGAATGAAGGGAGAAAAAGGGAGCCGTGGGGAGAAGGGCTCCAGGGGACCCAAGGGCTA CAAGGGAGAAGGGCAAGCGTGGCATCGACGGGGTGGACGCGTGAAGGGGGAGATGGGGTACCCAGGCCTGCC AGGCTGCAAGGGCTCGCCCGGGTTTGACGGCATTCAAGGACCCCCTGGCCCCAAGGGAGACCCCGGTGCCTTTGG ACTGAAAGGAGAAAAGGGCGAGCCTGGAGCTGACGGGGAGGCGGGGGAGACCAGGGAGCCATCTGGAGA CGGTGCCCCGGGGAGCGGGTGGCCCTGGAGAGAGAGCACCGGGGGGACCCCAGGCACGCGGGGACCAAGAGG AGACCCTGGTGAAGCTGGCCCGCAGGGTGATCAGGGAAGAGAGGCCCCGTTGGTGTCCCTGGAGACCCGGGCGA GGCTGGCCCTATCGGACCTAAAGGCTACCGAGGCGATGAGGGTCCCCCAGGGTCCGAGGGTGCCAGAGGAGCCCC AGGACCTGCCGGACCCCCTGGAGACCCGGGGCTGATGGGTGAAAGGGGGAGAAGACGGCCCCGCTGGAAATGGCAC CGAGGGCTTCCCCGGGTATCCGGGCAACAGGGGCGCTCCCGGGATAAACGGCACGAAGGGCTACCC CGGCCTCAAGGGGGACGAGAGAAGCCGGGGACCCCGGAGACGATAACAACGACATTGCACCCCGAGGAGTCAA AGGAGCAAAGGGGTACCGGGGTCCCGAGGGCCCCCAGGGACCCCCAGGACACCAAGGACCGCCTGGGCCGGACGA ATGCGAGATTTTGGACATCATGAAAATGTGCTCTTGCTGTGAATGCAAGTGCGGCCCCATCGACCTCCTGTT CGTGCTGGACAGCTCAGAGAGCATTGGCCTGCAGAACTTCGAGATTGCCAAGGACTTCGTCGTCAAGGTCATCGA CCGGCTGAGCCGGGACGAGCTGGTCAAGTTCGAGCCAGGGCAGTCGTACGCGGGTGTGGTGCAGTACAGCCACAG CCAGATGCAGGAGCACGTGAGCCTGCGCAGCCCCAGCATCCGGAACGTGCAGGAGCTCAAGGAAGCCATCAAGAG CCTGCAGTGGATGGCGGGCGCACCTTCACGGGGGAGGCCCTGCAGTACACGCGGGACCAGCTGCTGCCGCCCAG CCCGAACACCGCATCGCCCTGGTCATCACTGACGGCGCTCAGACACTCAGAGGGACACCACACCGCTCAACGT GCTCTGCAGCCCCGGCATCCAGGTGGTCTCCGTGGGCATCAAAGACGTGTTTGACTTCATCCCAGGCTCAGACCA TGCAGAGCTGCTGGAGGATGCCTTCCTGAAGAATGTCACCGCCCAGATCTGCATAGACAAGAAGTGTCCAGATTA CACCTGCCCATCACGTTCTCCCCCGGCTGACATCACCATCCTGCTGGACGCCTCCGCCAGCGTGGGCAGCCA CCACGACGTGCGGTGGCGGTGCAGTACAGCGGCCACGGGCCAGCGCCCAGAGCGGCGTCGCTGCAGTT CCTGCAGAACTACACGGCCCTGGCCAGTGCCGTCGATGCCATGGACTTTATCAACGACGCCACCGACGTCAACGA TGCCCTGGGCTATGTGACCCGCTTCTACCGCGAGGCCTCGTCCGGCGCTGCCAAGAAGAGGCTGCTGCTCTTCTC GATCTTCGTGGTGGTCGTCGCCCAGGTGAATGAGCCCCACATCCGCGTCCTGGTCACCGGCAAGACGGCCGA GTACGACGTGGCCTACGGCGAGAGCCACCTGTTCCGTGTCCCCAGCTACCAGGCCCTGCTCCGCGGTGTCTTCCA CCAGACAGTCTCCAGGAAGGTGGCGCTGGGCTAGCCCACCCTGCACGCCGGCACCAAACCCTGTCCTCCCACCC AGGAAAAGCTTGGAAAGCCAGGACACAACGCTGCTGCTTTTGTGCAGGGTCCTCCGGGGCTCAGCCCTGAGT TGGCATCACCTGCGCAGGGCCCTCTGGGGCTCAGCCTGAGCTAGTGTCACCTGCACAGGGCCCTCTGAGGCTCA ${\tt GCCCTGAGCTGGCGTCACCTGTGCAGGGCCCTCTGGGGCTCAGCCTGAGCTGGCCTCACCTGGGTTCCCCACCC}$ CGGGCTCTCCTGCCCTGCCCTCCCTCCTCCTCCTGCGCAGCTCCTTCCCTAGGCACCTCTGTGCT

6420/6881 FIGURE 5926B

FIGURE 5927

ACCTACGTGAGGGAGACCTGCGGGTGCTGCGGTGAGGCACTGCCCACGGCAGGGTCGGGGCCCATGCACCGGGTG GAGGGCGGAGTGCAGCAGGGCTGGGTCATCGCTGGGTCCTGCATGTGCACGTGACCCTAGGGTCTGAGGTCTCC CCGGTACCCCCGATGACCCTGCCACCCCCCAGACTGTGAGAAGCGCTGTGGCGCCCTGGACGTGGTCTTCGTC ATCGACAGCTCCGAGAGCATTGGGTACACCAACTTCACACTGGAGAAGAACTTCGTCATCAACGTGGTCAACAGG GGATGCCCCAGACCCCGAGGCCTCTGGCAACGACCTCACGCGTGCGGCTTGCAGGGACGCGTGTGGGCGTGGTGC AGTACAGCCACGAGGGCACCTTTGAGGCCATCCAGCTGGACGACGAACGTATCGACTCCCTGTCGAGCTTCAAGG AGGCTGTCAAGAACCTCGAGTGGATTGCGGGCGGCACCTGGACACCCTCAGCCCTCAAGTTTGCCTACGACCGCC ACGATGACCTCAACTTGCGGGCGCTGTGCGACCGCGACGTCACAGTGACGGCCATCGGCATCGGGGACATGTTCC ACGAGAAGCACGAGAGTGAAAACCTCTACTCCATCGCCTGCGACAAGCCACAGCAGGTGCGCAACATGACGCTGT TCTCCGACCTGGTCGCTGAGAAGTTCATCGATGACATGGAGGACGTCCTCTGCCCGGGTGAGCGTGTGGGCGCGG GGCAGTCGGCCGAGGAGCAGCAGGCCCCAGCCGCTGTCTAGCGTGAGCCCCAGGGACACCCCTCACCTGAGGGAT GAATGTGCAGCCCAGGATCTTGGGCTGTGGGTGGGAAGGGGTCGGGCCCTCTCGGGGCTGCAGGGCAGAGGCCAG CTGCACCCTGAGCCTGTCTAGGCAGATCAGTGAACGGCCGCTGAGGGTTCGCTAGGGACTGACCCTGGCCTGGCC CGGCCTCTCTCTCTCCAGACCCTCAGATCGTGTGCCCAGACCTTCCCTGCCAAACAGGTAATGCAGGGCAC GTGCAGGGACCCGGGGGCGGGGGGCCACTGCGGAGGCTGCTCCTTAGGGAGATGGCCCCAGGATGGCAGCACA CTAGCCTGGCGCTGTGCTCGCCATGTGGCCACTGGTCTTGAAGGCCCACCATGGGCCTTGCAGTCTCCCTCAGCT CGGCTCTCACATCTCTGGGAGTGGGGGAGCCCATGTCCCGGATGTGGCCCACGTGGGTGTGAAGCTGGAGCTGGG GGTGCCGTCCAGGCTCTGCTGGACGTGGTGCTGCCCCCATGGTGCACTGCTGCACCGTACCTGGGCCCACAGGAG GTCCCCGGGGGCGTTAGGAGCTGAGTCCCCCTCAGTGAGCCGTCCCCTCCAGGAGTGTGAGGGTAGGGATGCCAT GGAGACAGGGTGGGAGGTCCGACCTGGAGGACCACAGGGAGGAAACCTCAGGGTCTGCGGTACGAAGTCAGCGC TTCCTCAGCACGCGGTCGCGGTGTGCGTTCGGGCGTTCCATGGGGAG

GCAGTGAAAATGTTATTAGTTTTGAGGGGGTTTGGGAAGCCCAGCGGTACCTGAGGAGTTTCTGGACATTTAAGC TGAGGGAACCCCATCTGCCAGCTCGTGCGTGCTCAGACGGCGTCCATGTCTCAAGCGTTCTGTGAAGGCTGCGGT CCCCAGAAACCGAGTTTCGGGTCAGGGTCCTCTGTGTGCATTCCTGGGGGTCCATGTACCAGCTGTGACGACGTC GGTCTTGGTGAGGCCACAGGGCCAGGTCCACGCAAGGACTGTCCTGTCCTGTCCTGTGGTCTCTGGCCCCACGT GACACCCACACGTGTGGTAGGCAGCCTGGCCTGGGTTGTGGCTATGGCCAGGCCCCCAAGCTGTCCCCGATGCCC AGGGCTGGTGACCACCCAGGCAGGTGGGGGCCCCACTTGGTAACAGAGTCATAGGGCAGAACCCACCTGGGCTGC CACAGAAGGTCTGCCCCTGTGCCCACTGCTCCCCACCATGGCCAATCAGAAGAGTCAGGGGCTCCTGGTCT TTCCGGGAGGGACGTGGCCCAGCCAGCTCTAGGTGTTCTGAGCAGCTCTGGGACCCAGCGATTGAGGGGTCAGGC AGGTGGACAGGGCCTGGGGCCTGTGTCAGGGTCTCAGGCCTGGGAGCACCAGCAGAGGAGATGGCGGCTCCCAGC AGTGCCGCCTGAAAGTGTCTTGGGCTAAGGACCCACACCCAGGGCTGCCCTGCAGAAACGCCCCCGCAGAGCCCA GTGGTCTGTGAGGTTGCAGGCAGGGTGCGAATGGAAGGGCACAGGTGCGGGGCTGGCACCTGCCCGGTCCTGCCC ACCTCCCTCCGCCCAGCCCGCACCTGCGTCTCCCCACAGAGCTGTCCGTGGCACAGTGCACGCAGCGGCCCGTG GACATCGTCTTCCTGCTGGACGGCTCCGAGCGGCTGGGTGAGCAGAACTTCCACAAGGCCCGGCGCTTCGTGGAG GGTGGCCCGGCGAGCAGCAGGTGGCCTTCCCGCTGAGCCACAACCTCACGGCCATCCACGAGGCGCTGGAGACC ACACAATACCTGAACTCCTTCTCGCACGTGGGCGCAGGCGTGGTGCACGCCATCAATGCCATCGTGCGCAGCCCG CACGAGTCGGCGCACTCCATGCGCAAGCAGAACGTGGTACCCACCGTGCTGGCCTTGGGCAGCGACGTGGACATG GACGTGCTCACCACGCTCAGCCTGGGTGACCGCCGCCGCGTGTTCCACGAGAAGGACTATGACAGCCTGGCGCAA CCCGGCTTCTTCGACCGCTTCATCCGCTGGATCTGCTAGCGCCGCCCGGGCCCGGGCCCGCAGTCGAGGGTCGTGAG CCCACCCGTCCATGGTGCTAAGCGGGCCCGGGTCCCACACGGCCAGCACCGCTGCTCACTCGGACGCCCTG GGCCTGCACCTCTCCAGCTCCTCCCACGGGGTCCCCGTAGCCCCGGCCCCGCCCAGGCCCCAGGTCTCCCCAGGC GAGCAAGCCCTGACCCAATAAAGGCTTTGAACCC

FIGURE 5931

ATAGTCTGTGGCCCAGCAAAGCCACCCCAATCCCTGCACAAGGGTAAAAGGCCAGCATTAGAGCACTGCAGCAGC $\texttt{A} \underline{\textbf{ATG}} \texttt{ACGGAGGGCACGTGTCTGCGGCGCCGAGGGGGGCCCCTACAAGACCGAGCCCGCCACCGACCTCGGCCGCTG}$ CCTGGAAGCCTACGCCCTGGGGCTGGACACCAAGAATTACTTTAAGGACTTGCCCAAAGCCCACACCGCCTTTGA GGGGGCTCTGAACGGGATGACATTTTACGTGGGGCTGCAGGCTGAGGATGGGCACTGGACGGGTGATTATGGTGG CCCACTTTTCCTCCTGCCAGGCCTCCTGATCACTTGCCACGTGGCACGCATCCCTCTGCCAGCCGGATACAGAGA AGAGATTGTGCGGTACCTGCGGTCAGTGCAGCTCCCTGACGGTGGCTGGGGCCTGCACATTGAGGATAAGTCCAC CGTGTTTGGGACTGCGCTCAACTATGTGTCTCTCAGAATTCTGGGTGTTGGGCCTGACGATCCTGACCTGGTACG GAATGTTTACAGCTGGGAAGGCCTCAATACCCTGTTCCCAGAGATGTGGCTGTTTCCTGACTGGGCACCGGCACA CCCCTCCACACTCTGGTGCCACTGCCGGCAGGTGTACCTGCCCATGAGCTACTGCTACGCCGTTCGGCTGAGTGC CAACCTGTATGAGCACCACCACAGTGCCCACCTGCGGCAGCGGCCGTGCAGAAGCTGTATGAACACATTGTGGC CGACGACCGATTCACCAAGAGCATCAGCATCGGCCCGATCTCGAAAACCATCAACATGCTTGTGCGCTGGTATGT GGACGGGCCCGCCTCCACTGCCTTCCAGGAGCATGTCTCCAGAATCCCGGACTATCTCTGGATGGGCCTTGACGG CATGAAAATGCAGGGCACCAACGGCTCACAGATCTGGGACACCGCATTCGCCATCCAGGCTCTGAGGCGGG CGGGCACCACAGGCCCGAGTTTTCGTCCTGCCTGCAGAAGGCTCATGAGTTCCTGAGGCTCTCACAGGTCCCAGA TAACCCTCCCGACTACCAGAAGTACTACCGCCAGATGCGCAAGGGTGGCTTCTCCTTCAGTACGCTGGACTGCGG CTGGATCGTTTCTGACTGCACGGCTGAGGCCTTGAAGGCTGTGCTGCTCCTGCAGGAGAAGTGTCCCCATGTCAC CGAGCACATCCCCAGAGAACGGCTCTGCGATGCTGTGGCTGTGCTGCAGCATGAGAAATCCAGATGGAGGGTT CGCCACCTATGAGACCAAGCGTGGGGGGCACTTGCTGGAGCTGCTGAACCCCTCGGAGGTCTTCGGGGACATCAT GATTGACTACACCTATGTGGAGTGCACCTCAGCCGTGATGCAGGCGCTTAAGTATTTCCACAAGCGTTTCCCGGA GCACAGGGCAGCGGAGATCCGGGAGACCCTCACGCAGGGCTTAGAGTTCTGTCGGCGGCAGCAGAGGGCCGATGG CTCCTGGGAAGGCTCCTGGGAGTTTGCTTCACCTACGGCACCTGGTTTGGCCTGGAGGCCTTCGCCTGTATGGG GCAGACCTACCGAGATGGGACTGCCTGTGCAGAGGTCTCCCGGGCCTGTGACTTCCTGCTGTCCCGGCAGATGGC AGACGGAGGCTGGGGGGAGGACTTTGAGTCCTGCGAGGAGCGGCGTTATTTGCAGAGTGCCCAGTCCCAGATCCA GTGTCTACTTGAGAAACAGCTCCCCAATGGCGACTGGCCGCAGGAAAACATTGCTGGGGTCTTCAACAAGTCCTG TGCCATCTCCTACACGAGCTACAGGAACATCTTCCCCATCTGGGCCCTCGGCCGCTTCTCCCAGCTGTACCCTGA ${\tt GAGAGCCCTTGCTGGCCACCCC} {\color{red}{\textbf{TGA}}} {\color{red}{\textbf{GACATGCCTACCTGCTGGGTGCCGTCTGTGCGTTCCAGTGAGGCCAAGG}}$ GGTCCTGGCCGGGTTGGGGAGCCCTCCCATAACCCTGTCTTGGGCTCCAACCCCTCAACCTCTATCTCATAGATG TCATTTCTGAAAGTAGCTTGTCGGGCTTGGGTGAGGAAGGGGGCACAGGAGCCGTGACCCCTGAGGAGGCACAGC GCCTTCTGCCACCTCTGGGCACGGCCTCAAGGTAGTGAGGCTAGGAGGTTTTTTCTGACCAATAGCTGAGTTCTT GGGAGAGGAGCAGCTGTGCCTGTGTGATTCCTTAGTGTCGAGTGGGCTCTGGGCTGGGGTCGGCCCTGGGCAGGC TTCTCCTGCACCTTTTGTCTGCTGGGCTGAGGGACACGAGGGCAACCCTGTGACAATGGCAGGTAGTGTGCATCC GTGAATAGCCCAGTGCGGGGTTGCTCATGGAGCATCCTGAGGCCGTGCAGCAGGGAGCCCCATGCCCCTGGGTC GTGAGCTTGCCTGCGTATGGGGTGGTGTCATGGAGCCTCATGCCCCTGGGTCGTGAGCTCGCCTGAGTATGGGGT GGTGTCATGGAGCCGCATACCCCTGGGTTGTGAGCTCGCCTGCATATGCAGGGTCTGTCATGGAACATCCCAAGT CTGTGCAGCAGGGAGCCCCATGCCCCTGGGACATGAACCCACCTGCGTGGAATGCTGTTTGTGAGGTGTCTACAG GGTTTATAGTAGTCTTGTGGACACAGAAATGCACAGGGGACACTTACGGACACAGA

MTEGTCLRRRGGPYKTEPATDLGRWRLNCERGRQTWTYLQDERAGREQTGLEAYALGLDTKNYFKDLPKAHTAFE GALNGMTFYVGLQAEDGHWTGDYGGPLFLLPGLLITCHVARIPLPAGYREEIVRYLRSVQLPDGGWGLHIEDKST VFGTALNYVSLRILGVGPDDPDLVRARNILHKKGGAVAIPSWGKFWLAVLNVYSWEGLNTLFPEMWLFPDWAPAH PSTLWCHCRQVYLPMSYCYAVRLSAAEDPLVQSLRQELYVEDFASIDWLAQRNNVAPDELYTPHSWLLRVVYALL NLYEHHHSAHLRQRAVQKLYEHIVADDRFTKSISIGPISKTINMLVRWYVDGPASTAFQEHVSRIPDYLWMGLDG MKMQGTNGSQIWDTAFAIQALLEAGGHHRPEFSSCLQKAHEFLRLSQVPDNPPDYQKYYRQMRKGGFSFSTLDCG WIVSDCTAEALKAVLLLQEKCPHVTEHIPRERLCDAVAVLLNMRNPDGGFATYETKRGGHLLELLNPSEVFGDIM IDYTYVECTSAVMQALKYFHKRFPEHRAAEIRETLTQGLEFCRRQQRADGSWEGSWGVCFTYGTWFGLEAFACMG QTYRDGTACAEVSRACDFLLSRQMADGGWGEDFESCEERRYLQSAQSQIHNTCWAMMGLMAVRHPDIEAQERGVR CLLEKQLPNGDWPQENIAGVFNKSCAISYTSYRNIFPIWALGRFSQLYPERALAGHP

6427/6881 FIGURE 5933A

GTAATACTTAATTACCTTCTAATAATTGGAGCAGAAG**ATG**AACCCAACTAATCCTTTCAGTGGGCAGCAGCCTAG TGCTTTTTCGGCGTCTTCTAGTAATGTAGGAACACTTCCATCTAAGCCGCCATTTCGATTTGGTCAACCTTCTCT TTTTGGACAAAACAGTACCTTATCTGGGAAGAGCTCGGGATTTTCACAGGTATCCAGCTTTCCAGCGTCTTCTGG AGTAAGTCATTCCTCTTCAGTGCAAACATTAGGGTTCACCCAAACCTCAAGTGTTGGACCCTTTTCTGGACTTGA GCACACTTCCACCTTTGTGGCTACCTCTGGGCCTTCAAGTTCATCTGTGCTGGGAAACACAGGATTTAGTTTTAA ATCACCCACCAGTGTTGGGGCTTTCCCAAGCACTTCTGCTTTTGGACAAGAAGCTGGAGAAATAGTGAACTCTGG TTTTGGGAAAACAGAATTCAGCTTTAAACCTCTGGAAAATGCAGTGTTCAAACCAATACTGGGGGCTGAATCTGA CCTGGCCCCTTTCTCTTTTCCTCAAGTAACAAGTAGTTCAGCTACCACTTCAAATTTTACCTTTTCAAAACCTGT TAAGTCAATATTTGGAAGTTCTAATAATAGCTTCAGTAGCTTCCCTGTATCATCTGCGGTTTTGGGCGAACCTTT CCAGGCTAGCAAAGCAGGTGTCAGGCAGGGGTGTGAAGAAGCTGTTTCCCAGGTGGAACCACTTCCCAGCCTAAT GAAAGGACTGAAAAGGAAGGAGGACCAGGATCGCTCCCCAAGGAGACATGGCCACGAGCCAGCAGAAGATTCGGA TCCTCTGTCCCGGGGGGATCATCCTCCAGACAAACGACCTGTCCGCCTGAATCGACCCCGGGGAGGTACTTTATT TGGTCGGACGATACAGGATGTTTTCAAAAGCAATAAGGAAGTAGGTCGTCTGGGCAACAAGGAGGCCAAAAAGGA AACTGGCTTTGTTGAGTCTGCAGAAAGTGACCACATGGCTATCCCAGGAGGGAATCAGTCTGTCCTGGCACCTTC CCGGATTCCAGGTGTGAATAAAGAGGAAGAAACTGAAAGTAGAGAGAAGAAGAAGATTCTCTAAGAGGAACTCC GGCGCGTCAGAGTAACAGAAGCGAGAGCACAGACAGTCTTGGGGGGCTTGTCTCCCTCTGAAGTCACAGCCATCCA GTGCAAGAACATCCCTGACTACCTCAACGACAGGACCATTCTGGAGAACCATTTTGGCAAAATTGCTAAAGTGCA GCGCATCTTTACCAGGCGCAGCAAAAAGCTTGCAGTGGTACATTTCTTTGATCATGCATCTGCAGCCCTGGCTAG AAAGAAGGGGAAAAGTTTGCATAAAGACATGGCTATCTTTTGGCACAGGAAGAAAATAAGCCCCAATAAGAAACC CTTTTCCCTGAAGGAGAAGAAACCAGGTGACGGTGAAGTCAGCCCGAGCACAGAGGATGCACCCTTTĆAGCACTC TCCTCTTGGCAAGGCCGCAGGGAGGACTGGTGCTAGCAGCCTCCTGAATAAAAGCTCTCCAGTGAAGAAGCCAAG TCTTCTAAAGGCCCACCAATTCGAGGGAGACTCTTTTGACTCAGCCTCCGAGGGCTCCGAGGGCCTCGGGCCATG TGTGCTCTCCCTCAGTACCCTGATAGGCACTGTGGCTGAGACATCCAAGGAGAAGTACCGCCTGCTTGACCAGAG AGACAGGATCATGCGGCAAGCTCGGGTGAAGAGAACCGATCTGGACAAAGCGAGGACTTTTGTTGGCACCTGCCT GGATATGTGTCCTGAGAAGGAGGGGACATGCGGGAGACCCGTAGCCAGCTGAGCGTGTTCGAAGTGGTCCCAGG GACTGACCAGGTGGACCACGCAGCAGCTGTGAAAGAGTACAGTCGGTCCTCGGCGGATCAGGAGGAGCCCCTGCC CCACGAGCTGCGGCCCTTGCCAGTGCTCAGCAGGACCATGGACTACCTGGTGACCCAGATCATGGACCAGAAGGA GGGCAGCCTGCGGGATTGGTATGACTTCGTGTGGAACCGCACGCGTGGCATACGGAAGGATATCACGCAGCAGCA CCTCTGTGACCCCCTGACGGTGTCCCTGATTGAGAAGTGCACCCGGTTTCACATCCACTGTGCCCACTTCATGTG TGAGGAGCCCATGTCCTCCTTTGATGCCAAGATCAATAATGAGAACATGACCAAGTGCCTGCAGAGCCTGAAGGA GATGTACCAGGACCTGAGAAACAAGGGTGTCTTCTGTGCCAGCGAAGCGGAGTTCCAGGGCTACAATGTTCTGCT CAGTCTCAACAAGGGAGACATCCTAAGAGAAGTACAACAGTTCCATCCTGCTGTTAGAAACTCATCTGAGGTGAA ATTTGCTGTTCAGGCTTTTGCTGCATTGAACAGTAATAATTTTGTGAGATTTTTCAAACTGGTCCAGTCAGCTTC GTACACGGTGAGCACACAGCGATCTACCATCTTTCCCCTGGATGGTGTGCGCATGCTGCTGTTCAGAGACTG TGAAGAGGCCACCGACTTCCTCACCTGCCACGGCCTCACCGTTTCCGACGGCTGTGTGGAGCTGAACCGGTCTGC ATTCCTGGAACCAGAGGGATTATCCAAGACCAGGAAGTCGGTGTTTATTACTAGGAAGCTGACGGTGTCAGTCGG GGAAATTGTGAACGGAGGGCCATTGCCCCCCGTCCCTCGTCACACCCCTGTGTGCAGCTTCAACTCCCAGAACAA GTACATCGGGGAGAGCCTGGCCGGGAGCTGCCCGTCAGCACCCAGAGACCCGGCTCCGACACAGTGGGCGGAGG GAGAGGAGAGGAGTGTGGTGTAGAGCCGGATGCACCCCTGTCCAGTCTCCCACAGTCTCTACCAGCCCCTGCGCC GCCTGAACCACCGCCTCCAGAGCCCGTGCCCATGTACTCTGACGAGGACCTGGCGCAGGTGGTGGACGAGCTCAT CCAGGAGGCCCTGCAGAGGGACTGTGAGGAAGTTGGCTCTGCGGGTGCTGCCTACGCAGCTGCCCTGGGTGT TTCTAATGCTGCTATGGAGGATTTGTTAACAGCTGCAACCACGGGCATTTTGAGGCACATTGCAGCTGAAGAAGT GGTGTTAAGTGAGCTGAGCCAGGGCCTGGCCGTGGAGCTGATGGAACGCGTGATGATGGAGTTTGTGAGGGAAAC

6428/6881 FIGURE 5933B

CTGCTCCCAGGAGTTGAAGAATGCAGTAGAGACAGACCAGAGGGTCCGTGTGGCCCGTTGCTGTGAGGATGTCTG TGCCCACTTAGTGGACTTGTTTCTCGTGGAGGAAATCTTCCAGACTGCAAAGGAGACCCTCCAGGAGCTTCAGTG CTTCTGCAAGTATCTACAGCGGTGGAGGGAAGCTGTCACAGCCCGCAAGAAACTGAGGCGCCAAATGCGGGCTTT CCCTGCTGCGCCCTGCTGCGTGACGTGAGCGACCGGCTGAGGGCGCTGGCGCCCAGCGCAGAGTGCCCCATTGC TGAAGAGAACCTGGCCAGGGGCCTCCTGGACCTGGGCCATGCAGGGAGATTGGGCATCTCTTGCACCAGGTTAAG GCGGCTCAGAAACAAGACAGCTCACCAGATGAAGGTTCAGCACTTCTACCAGCAGCTGCTGAGTGATGTGGCATG GGCGTCTCTGGACCTGCCATCCCTCGTGGCTGAGCACCTCCCTGGGAGGCAGGAGCATGTGTTTTTGGAAGCTGGT GCTGGTGTTGCCGGATGTAGAGGAGCAGTCCCCAGAGAGTTGTGGCAGAATTCTAGCAAATTGGTTAAAAGTCAA GTTCATGGGAGATGAAGGCTCAGTGGATGACACATCCAGCGATGCTGGTGGGATTCAGACGCTTTCGCTTTTCAA CTCACTTAGCAGCAAAGGGGATCAGATGATTTCTGTTAACGTGTGTATAAAGGTGGCCCATGGCGCCCTCAGTGA TGGTGCCATTGATGCTGTGGAGACACAGAAGGACCTCCTGGGAGCCAGTGGGCTCATGCTGCTGCTTCCCCCCAA AATGAAGAGTGAGGACATGGCAGAGGAGGACGTGTACTGGCTGTCGGCCTTGCTGCAGCTCAAGCAGCTCCTGCA GGCTAAGCCCTTCCAGCCTGCGCTTCCTCTGGTGGTTCTTGTGCCTAGCCCAGGAGGGGACGCCGTTGAGAAGGA AGTAGAAGATGGTCTGATGCTACAGGACTTGGTTTCAGCTAAGCTGATTTCAGATTACACTGTTACCGAGATCCC TGATACCATTAATGATCTACAAGGTTCAACTAAGGTTTTGCAAGCAGTGCAGTGGCTGGTTTCCCACTGCCCCCA ${\tt TTCCCTTGACCTCTGCCAGACTCTCATTCAGTACGTCGAAGACGGGATTGGCCATGAGTTTAGTGGCCGCTT}$ TTTCCATGACAGAAGAGAGGGGCGTCTGGGCGGTCTTGCTTCTCAGGAGCCTGGCGCCATCATTGAGCTGTTTAA CAGTGTGCTGCAGTTCCTGGGCTTCTGTGGTGTCCTCTGAACAGCTGTGTGACCTGTCCTGGCCTGTCACTGAGTT TGCTGAGGCAGGGGGCAGCCGGCTGCTTCCTCACCTGCACTGGAATGCCCCAGAGCACCTGGCCTGAGCA GGCTGTGCTCGGGGTTCCAGCTTCCGCAGATGGACCTTCCACCCCTGGGGGCCCCCTGGCTCCCCGTGTGCTCCAT GGTTGTCCAGTACGCCTCCCAGATCCCCAGCTCACGCCAGACACAGCCTGTCCTCCAGTCCCAGGTGGAGAACCT GATCCCATGGGATGATCTTATCGCCTTGTGTATCAACCACAGCTGAGAGACTGGACGCCCCCCCGGCTTCCTGT TACATCAGAGGCGCTGAGTGAAGATGGTCAGATATGTGTGTATTTTTTTAAAAACGATTTGAAAAAATATGATGT TCCTTTGTCGTGGGAACAAGCCAGGTTGCAGACGCAGAAGGAGCTACAGCTGAGAGAGGGACGTTTGGCAATAAA GCCTTTTCATCCTTCTGCAAACAATTTTCCCATACCATTGCTTCACATGCACCGTAACTGGAAGAGGAGCACAGA GTGTGCTCAAGAGGGGAGGATTCCCAGCACAGAGGATCTGATGCGAGGAGCTTCTGCTGAGGAGCTCTTGGCGCACA GTGTTTGTCGAGCAGTCTGCTGCTGGAGAAAGAAGAAGAAGAGGTTTGAAGATCAGCTTCAGCAATGGTTGTC CACTATTGAACCTGTGATGAAAACATCTGTAACTACTAGCCCACAGAGTGACATGATGAGGGAGCAACTGCAGCT GTCAGAGGCGACAGGAACGTGTCTAGGCGAACGACTAAAGCACCTGGAAAGGCTGATCCGGAGTTCAAGGGAAGA GGAAGTTGCCTCTGAGCTCCATCTCTCTGCGCTGCTAGACATGGTGGACATT**TGA**GCAGCCTGACCTGTGGGGAG GGGGTCTCTCCCGAAGAGTTTCTGTTTTTACTCAAAATAATGTTATTCTCAGATGCTTGATGCACTGTTGGAAAT GTGATTAATTTAATCATGCAGATAAACCATTTAAATGTC

 ${\tt MNPTNPFSGQQPSAFSASSSNVGTLPSKPPFRFGQPSLFGQNSTLSGKSSGFSQVSSFPASSGVSHSSSVQTLGF}$ TQTSSVGPFSGLEHTSTFVATSGPSSSSVLGNTGFSFKSPTSVGAFPSTSAFGQEAGEIVNSGFGKTEFSFKPLE NAVFKPILGAESEPEKTQSQIASGFFTFSHPISSAPGGLAPFSFPQVTSSSATTSNFTFSKPVSSNNSLSAFTPA LSNQNVEEEKRGPKSIFGSSNNSFSSFPVSSAVLGEPFQASKAGVRQGCEEAVSQVEPLPSLMKGLKRKEDQDRS $\tt PRRHGHEPAEDSDPLSRGDHPPDKRPVRLNRPRGGTLFGRTIQDVFKSNKEVGRLGNKEAKKETGFVESAESDHM$ AIPGGNQSVLAPSRIPGVNKEEETESREKKEDSLRGTPARQSNRSESTDSLGGLSPSEVTAIQCKNIPDYLNDRT ILENHFGKIAKVQRIFTRRSKKLAVVHFFDHASAALARKKGKSLHKDMAIFWHRKKISPNKKPFSLKEKKPGDGE VSPSTEDAPFQHSPLGKAAGRTGASSLLNKSSPVKKPSLLKAHQFEGDSFDSASEGSEGLGPCVLSLSTLIGTVA ETSKEKYRLLDQRDRIMRQARVKRTDLDKARTFVGTCLDMCPEKERYMRETRSQLSVFEVVPGTDQVDHAAAVKE YSRSSADQEEPLPHELRPLPVLSRTMDYLVTQIMDQKEGSLRDWYDFVWNRTRGIRKDITQQHLCDPLTVSLIEK CTRFHIHCAHFMCEEPMSSFDAKINNENMTKCLQSLKEMYQDLRNKGVFCASEAEFQGYNVLLSLNKGDILREVQ QFHPAVRNSSEVKFAVQAFAALNSNNFVRFFKLVQSASYLNACLLHCYFSQIRKDALRALNFAYTVSTQRSTIFP LDGVVRMLLFRDCEEATDFLTCHGLTVSDGCVELNRSAFLEPEGLSKTRKSVFITRKLTVSVGEIVNGGPLPPVP RHTPVCSFNSQNKYIGESLAAELPVSTQRPGSDTVGGGRGEECGVEPDAPLSSLPQSLPAPAPSPVPLPPVLALT PSVAPSLFQLSVQPEPPPPEPVPMYSDEDLAQVVDELIQEALQRDCEEVGSAGAAYAAAALGVSNAAMEDLLTAA TTGILRHIAAEEVSKERERREQERQRAEEERLKQERELVLSELSQGLAVELMERVMMEFVRETCSQELKNAVETD QRVRVARCCEDVCAHLVDLFLVEEIFQTAKETLQELQCFCKYLQRWREAVTARKKLRRQMRAFPAAPCCVDVSDR LRALAPSAECPIAEENLARGLIDLGHAGRIGISCTRIRRIRNKTAHQMKVQHFYQQLISDVAWASIDIPSIVAEH LPGRQEHVFWKLVLVLPDVEEQSPESCGRILANWLKVKFMGDEGSVDDTSSDAGGIQTLSLFNSLSSKGDQMISV NVCIKVAHGALSDGAIDAVETQKDLLGASGLMLLLPPKMKSEDMAEEDVYWLSALLQLKQLLQAKPFQPALPLVV LVPSPGGDAVEKEVEDGLMLQDLVSAKLISDYTVTEIPDTINDLQGSTKVLQAVQWLVSHCPHSLDLCCQTLIQY VEDGIGHEFSGRFFHDRRERRLGGLASQEPGAIIELFNSVLQFLASVVSSEQLCDLSWPVTEFAEAGGSRLLPHL HWNAPEHLAWLKQAVLGFQLPQMDLPPLGAPWLPVCSMVVQYASQIPSSRQTQPVLQSQVENLLHRTYCRWKSKS PSPVHGAGPSVMEIPWDDLIALCINHKLRDWTPPRLPVTSEALSEDGQICVYFFKNDLKKYDVPLSWEQARLQTQ KELQLREGRLAIKPFHPSANNFPIPLLHMHRNWKRSTECAQEGRIPSTEDLMRGASAEELLAQCLSSSLLLEKEE NKRFEDQLQQWLSEDSGAFTDLTSLPLYLPQTLVSLSHTIEPVMKTSVTTSPQSDMMREQLQLSEATGTCLGERL KHLERLIRSSREEEVASELHLSALLDMVDI

 ${\tt MSELEKAMVALIDVFHQYSGREGDKHKLKKSELKELINNELSHFLEEIKEQEVVDKVMETLDNDGDGECDFQEFM} \\ AFVAMVTTACHEFFEHE$

CTTTGGGTTCCTGTTGGACATCGATGGAGTGCTTGTGCGGGGCCACAGAGTGATCCCTGCTGCTCTGAAAGCCTT CCGAAGGCTGGTGAACTCCCAGGGGCAGCTGCGGGTGCCCGTGGTTTTTGTTACAAATGCTGGGAACATCTTACA ACACAGCAAAGCCCAGGAGCTGTCAGCCCTGCTGGGGTGCGAGGTGGATGCAGACCAAGTTATCCTCTCACAG CCCCATGAAGCTCTTCTCCGAGTACCATGAGAAGCGGATGCTGGTGTCTGGACAGGGGCCCGTGATGGAAAATGC CCAGGGACTGGGCTTCCGAAATGTCGTCACCGTGGATGAGCTGCGGATGGCCTTTCCTCTGCTTGACATGGTGGA CCTGGAGCGGCGCCTAAAGACCACGCCCCTCCCGAGGAATGACTTCCCCCGCATTGAAGGGGTGCTCCTCCTAGG GGAGCCGGTCCGCTGGGAGACCAGCCTGCAGCTGATCATGGATGTCCTCCTCAGCAATGGGAGCCCTGGGGCTGG CCTGGCAACACCCCCCTACCCCCACCTCCCGTCCTAGCCAGCAACATGGATCTCCTGTGGATGGCTGAAGCCAA GATGCCCAGGTTTGGACATGGCACCTTTCTGCTGTGCCTGGAAACCATTTACCAGAAAGTGACGGGCAAGGAGCT GAGATACGAGGCCTGATGGCCAAACCCAGCATCCTCACTTACCAGTATGCCGAGGACCTGATCAGGCGACAGGC GGAGAGGCGGGGCTGGGCCGCCCCATCCGGAAGCTCTATGCTGTGGGTGATAACCCTATGTCTGACGTATACGG CGCCAACCTGTTCCACCAGTACCTGCAGAAGGCAACGCATGATGGGGCGCCAGAACTAGGGGCCGGGGGCACACG GCAGCAACAGCCCTCAGCAAGCCAGAGCTGCATCTCCATCCTGGTGTACAGGCGTCTACAATCCCAGGAACCC ACAGTCCACGGAGCCTGTCCTTGGAGGAGGGGAGCCTCCATTCCACGGGCACCGAGACTTATGCTTCAGTCCAGG GCTCATGGAGGCCTCCCACGTGGTGAATGACGTGAATGAGGCTGTGCAGCTGGTCTTCCGCAAGGAGGGCTGGGC TTTGGAGTGAGGGCAGTGCGGTGAGGGGGTGAGCCTGGACCTGTGGGCGAGTCCCATTGGCTGGGCTCT GGCCTGATCACTGGGCTCAGGTCAGGGCTTGGTTCCCTTGCCACCCTTCTTGCCGCCCCATGAGTGTGGCATTAC TGGTCACTTGGAAGAAGACAGTGACTCTTTTTCCCTGCTGGGTAGCATTTTGTATGGAACGGTTGGAATTTTCTG GGCCCAGTTCCCACGTGCCTTTCGTGGCAGTCTAACCTCAGGCCATTCTCTTCCCCTGTGTGCCTCAGTGTCCTT CTCATTTCAGTAGGGACTTCTGAAATGGGGGAGGCAGTGTGGAATACTGTGGATGTCTGTGCAGAGCCTTTGCCG GCACTGAAGGCATGCAGCCTGTCGGCAGAGTGTCTTAACACCAGATGCTACTTTTTACTGTATTGTAGTTTATTG CCCGGAGATGTGGGGCTTTTTTTTTAAATAAATAATCATAATAAATGTTCATGATGCTGACTCTTGTGA

MAAWGCVAALGAARGLCWRAARAAGLQGRPARRCYAVGPAQSPPTFGFLLDIDGVLVRGHRVIPAALKAFRRLV NSQGQLRVPVVFVTNAGNILQHSKAQELSALLGCEVDADQVILSHSPMKLFSEYHEKRMLVSGQGPVMENAQGLG FRNVVTVDELRMAFPLLDMVDLERRLKTTPLPRNDFPRIEGVLLLGEPVRWETSLQLIMDVLLSNGSPGAGLATP PYPHLPVLASNMDLLWMAEAKMPRFGHGTFLLCLETIYQKVTGKELRYEGLMGKPSILTYQYAEDLIRRQAERRG WAAPIRKLYAVGDNPMSDVYGANLFHQYLQKATHDGAPELGAGGTRQQQPSASQSCISILVCTGVYNPRNPQSTE PVLGGGEPPFHGHRDLCFSPGLMEASHVVNDVNEAVQLVFRKEGWALE

AGAGCCCACCCTTTGGGTTCCTGTTGGACATCAATGGAGTGCTTGTGCGGGGCCACAGAGTGATCCCTGCTG CTCTGAAAGCCTTCCGAAGGCTGGTGAACTCCCAGGGGCAGCTGCGGGTGCCCGTGGTTTTTGTTACAAATGCTG GGAACATCTTACAACACAGCAAAGCCCAGGAGCTGTCAGCCCTGCTGGGGTGCGAGGTGGATGCAGACCAAGTTA TCCTCTCTCACAGCCCCATGAAGCTCTTCTCCGAGTACCATGAGAAGCGGATGCTGGTCTGGACAGGGGCCCG TGATGGAAAATGCCCAGGGACTGGGCTTCCGAAATGTCGTCACCGTGGATGAGCTGCGGATGGCCTTTCCTCTGC TTGACATGGTGGACCTGGAGCGGCGGCTAAAGACCACGCCCCTCCCGAGGAATGACTTCCCCCGCATTGAAGGGG TGCTCCTCCTAGGGGAGCCGGTCCGCTGGGAGACCAGCCTGCAGCTGATCATGGATGTCCTCCTCAGCAATGGGA GCCCTGGGGCTGGCCAACACCCCCCTACCCCCACCTCCCGTCCTAGCCAGCAACATGGATCTCCTGTGGA TGGCTGAAGCCAAGATGCCCAGGTTTGGACATGGCACCTTTCTGCTGTGCCTGGAAACCATTTACCAGAAAGTGA CGGGCAAGGAGCTGAGATACGAGGGCCTGATGGGCAAACCCAGCATCCTCACTTACCAGTATGCCGAGGACCTGA TCAGGCGACAGGCGGAGAGGCGGGGCTGGGCCCCCCCATCCGGAAGCTCTATGCTGTGGGTGATAACCCTATGT CTGACGTATACGGCGCCAACCTGTTCCACCAGTACCTGCAGAAGGCAACGCATGATGGGGGCGCCAGAACTAGGGG $\tt CCGGGGGCACACGCCACACGCCTCAGCAAGCCAGAGCTGCATCTCCATCCTGGTGTACAGGCGTCTACA$ ATCCCAGGAACCCACAGTCCACGGAGCCTGTCCTTGGAGGAGGGGAGCCTCCATTCCACGGGCACCGAGACTTAT GCTTCAGTCCAGGGCTCATGGAGGCCTCCCACGTGGTGAATGACGTGAATGAGGCTGTGCAGCTGGTCTTCCGCA AGGAGGGCTGGGCTTTGGAGTGAGGGCAGTGCGGTGGAGGTGAGGGGGTGAGCCTGGACCTGTGGGCGAGTCCCA AGTGTGGCATTACTGGTCACTTGGAAGAAGACAGTGACTCTTTTTCCCTGCTGGGTAGCATTTTGTATGGAACGG TTGGAATTTTCTGGGCCCAGTTCCCACGTGCCTTTCGTGGCAGTCTAACCTCAGGCCATTCTCTTCCCCTGTGTG CCTCAGTGTCCTTCTCATTTCAGTAGGGACTTCTGAAATGGGGGAGGCAGTGTGGAATACTGTGGATGTCTGTGC AGAGCCTTTGCCGGCACTGAAGGCATGCAGCCTGTCGGCAGAGTGTCTTAACACCAGATGCTACTTTTTACTGTA ΑΑΑΑΑΑΑΑΑΑΑΑ

MYAWFFLPSFSQSPPTFGFLLDIDGVLVRGHRVIPAALKAFRRLVNSQGQLRVPVVFVTNAGNILQHSKAQELSA LLGCEVDADQVILSHSPMKLFSEYHEKRMLVSGQGPVMENAQGLGFRNVVTVDELRMAFPLLDMVDLERRLKTTP LPRNDFPRIEGVLLLGEPVRWETSLQLIMDVLLSNGSPGAGLATPPYPHLPVLASNMDLLWMAEAKMPRFGHGTF LLCLETIYQKVTGKELRYEGLMGKPSILTYQYAEDLIRRQAERRGWAAPIRKLYAVGDNPMSDVYGANLFHQYLQ KATHDGAPELGAGGTRQQQPSASQSCISILVCTGVYNPRNPQSTEPVLGGGEPPFHGHRDLCFSPGLMEASHVVN DVNEAVQLVFRKEGWALE

AGGAACCGGAACCCGCGGTTATAAAGTAAAGGAACCCGAGATCTGCGCAGGGGTTCCCTTTGCCGATTTCTCTCA CCTCACCTTCAAACCTAAACTCGAGCCTACTGTTCACCGGCCTAGCATTGCTCTCGCC<u>ATG</u>CCTCTCAGCGATG CTGACGTGCAAAAGCAGATAAAGCATATGATGGCTTTCATTGAACAAGAAGCCAATGAGAAAGCAGAAGAAATAG ATGCAAAGGCAGAAGAAGAGTTCAACATAGAGAAAGGTCGGCTTGTGCAAACCCAAAGACTAAAGATTATGGAAT ATTATGAGAAGAAAGAGAAACAGATTGAGCAGCAGAAGAAAATTCAGATGTCCAATTTGATGAATCAAGCGAGAC TCAAAGTCCTCAGAGCAAGAGATGACCTTATCACAGACCTACTAAATGAAGCAAAACAGAGACTCAGCAAGGTGG TAAAAGATACAACCAGGTACCAAGTGCTGCTGGATGGACTGGTTCTCCAGGGTTTGTACCAGTTGCTGGAGCCCC GAATGATTGTTCGTTGCAGGAAACAAGATTTCCCTCTGGTAAAGGCTGCAGTGCAGAAGGCAATTCCTATGTACA TTGAGATCTATAATGGAGATCGTAAAATAAAGGTTTCCAACACCCTGGAAAGCCGGCTGGATCTCATAGCCCAGC $AGATGATGCCAGAAGTCCGGGGAGCCTTGTTTGGTGCAAATGCCAACAGGAAGTTTTTGGAC{\color{red}{TAA}}$ CCCTTCAGGA GGTGGAGCTCGTCGTCAGCTCTCCTGCTGTGATGTGGAAGCTTCTGATATTTGAAGAAACACGAATGTCTCTGTA GCTTCCTCTTCACTGCCCCAGTATTGCTCTGTATTTATCAGCGATGCCCTCTGTCACTCATGCCTTAATT GTTCACAATGGTGGAAAGCTTCATGTAATATGATCAGGACCCACCTCCAGTTCTTCTGAAAGTGTGACAGTGTCC AGCCGGTTCTGCAGCACTAGGGGGGGGGGGGAGATGGTGGTTGCATGGGCTTCCTGGGTCTCCACTCTCGGTCTGG CCTAAAGGTGATGTATTTGGTGTTTTGGCCCTGCAGTCCCCACTCTTGAGGCTTAAGGCGCATGTGGCACACCACT CCTTCCAGCAGTAGTCGCTTTACTGTTACCTGTTTAGGCCTAGAAGTTTTCCCTCATCTGTAAATGTGATTTAAA ATCTAAGCCATGAATATGCTTTATTTATTAAAAGAGTTATGCGGATTTAATGTGA

MALSDADVQKQIKHMMAFIEQEANEKAEEIDAKAEEEFNIEKGRLVQTQRLKIMEYYEKKEKQIEQQKKIQMSNL MNQARLKVLRARDDLITDLLNEAKQRLSKVVKDTTRYQVLLDGLVLQGLYQLLEPRMIVRCRKQDFPLVKAAVQK AIPMYKIATKNDVDVQIDQESYLPEDIAGGVEIYNGDRKIKVSNTLESRLDLIAQQMMPEVRGALFGANANRKFL D

6438/6881 FIGURE 5943A

GAAGAGTCCAGTGAAGCCGGGAACCAGAGGCTCCAGCAGGTCATCCACGCGGCGGATCCTCTGGAGATCCAGGCT GGAGCCCCATTGGATGAGAATGACCTAGAGGAAGATGTGGACTCAGAACCAGCCGAGATAGAAGGGGAGGCAGCA GAGGATGGGGACCCAGGGGACACTGGTGCTGAGCTGGATGATGATCAGCACTGGTCTGACAGCCCGTCGGATGCT GACAGAGAGCTGCGTTTGCCGTGCCCAGCTGAGGGGGAAGCAGAGCTGGAGCTGAGGGTGTCGGAAGATGAGGAG TCAGCTCTTCTGTTCATTCCAGTCCACAGCCCCTCAACAGAGGGGCCCCAACTCCCACCTGTCCCTGCCGCCACC CAGGAGAAATCACCTGAGGAGCGCCTTTTCCCTGAGCCTTTGCTCCCCAAAGAGAAGCCCAAAGCTGATGCCCCC TCGGATCTGAAAGCTGTGCACTCTCCCATCCGATCACAGCCAGTGACCCTGCCAGAAGCTAGGACTCCTGTCTCA CCCCAGCCTTCCACCGAGGCCACTGTCCCATCCCCTACCCAGTCCCCATACGCTTCCAGCCTGCCCCGGCCAAA ACATCCACCCCACTGGCCCCTCTCCCTGTCCAAAGCCAAAGTGACACCAAGGACAGACTGGGCAGCCCCCTTGCT GTGGATGAGGCCCTCAGACGGAGCGACCTGGTGGAGGAGTTCTGGATGAAGAGTGCGGAGATCCGCCGCAGCCTC AAATCCTATTCCGTTGAAAAGTCCCCCCAGGATGAGGGACTCCACCTTCTCAAGCCTCTGTCCATCCCCAAAAGG CTGGGCCTGCCAAAGCCGGAAGGCGAGCCGTTGTCCCTGCCAAGCCCCCGGTCCCGTCCGACAGAGAGCTACGC AGCGCCCAGGAGGAGCGCAGGGAGCTGTCCAGCAGCTCTGGCCTGGGCCTGCACGGGAGCTCCTCCAACATGAAG CCCCGGGCGAGGAGCCCGCCACCTTGCGGAGGAAGCTCAGGGAGGCCGAGCCCAATGCCTCGGTGGTCCCGCCG CCCTTGCCCGCCACCTGGATGCGGCCCCCCGGGAGCCTGCTCAGCCCCCAGAGAGGAGGTGCGGAAGTCGTTT GTGGAGAGCGTGGAGGAGATTCCCTTTGCTGATGATGTGGAGGACACCTATGACGACAAGACTGAGGACTCAAGC CTGCAGGAGAAATTCTTCACGCCCCGTCCTGCTGGCCGCCCCGAGAAGCCTCGCCACCCGCCCCTGGCCAAG GAGAACGGGAGGCTGCCTCTGGAGGGGACGCTGCAGCCACAGAAGAGGGGGGCTGCCCTTGGTGTCCGCGGAA GCCAAGGAGTTGGCCGAGGAGCGCATGCGAGCCAGGGAGAAGTCCGTGAAGAGCCAGGCGCTGCGGGACGCCATG GCCAGGCAGCTGAGCAGGATGCAGCAGATGGAGCTGGCCTCAGGCCCCCAGGCCCCGCAAGGCGTCCTCAGCA CCCTCCCAGGGCAAGGAGCGCCGGCCTGACTCCCCCACACGCCCCACTCTCAGGGGGCTCCGAGGAGCCCACCCTG AAGCATGAAGCCACCAGCGAGGAGGTCCTCTCCCCGCCGTCGGACTCAGGGGGCCCAGATGGCTCTTTCACTTCA TCCAAAGGCGAGGGCCGGCCCCGGAGAAGCCCAGCTCCAACCTCCTAGAAGAAGCCGCCGCCAAACCCAAGTCC CTGTGGAAGTCCGTCTTCTCCGGGTACAAGAAGGACAAGAAGAAGAAGGCCGACGACAAGTCCTGCCCCAGCACC CCCTCCAGCGGGGCCACGGTGGACTCTGGAAAGCACAGGGTGCTTCCCGTCGTAAGGGCAGAGCTGCAGCTCCGG CGCCAGCTGAGCTTCTCCGAGGACTCAGACCTCTCCAGCGACGATGTCCTTGAGAAGTCCTCACAGAAGTCCCGG CGAGAGCCAAGAACCTACACGGAGGAGGAACTGAATGCCAAGCTGACCCGGCGTGTGCAAAAGGCAGCTCGGAGA CAGGCCAAGCAGGAGGAGCTTAAGCGGCTGCATCGAGCCCAGATCATCCAGCGGCAGCTGCAGCAGGTGGAGGAG AGGCAGCGGCGGCTGGAGAAAGGGGCGTGGCTGTGGAGAAGGCGCTCCGGGGCGAAGCAGGCATGGGCAAGAAG GACGACCCCAAGCTGATGCAGGAGTGGTTCAAGCTAGTGCAGGAGAAGAACGCCATGGTGCGCTACGAGTCGGAG CTGATGATCTTTGCCCGGGAGCTGGAGCTGGAAGACCGGCAGAGTCGACTGCAGCAGGAGCTCCGGGAACGCATG GCAGTGGAAGATCACCTTAAGACTGAGGAGGAGCTGTCAGAAGAAGCAGATTCTCAATGAGATGCTGGAGGTG ${\tt GAGGCTGCCATGCTGTCCAAGGGCTTCAGCCTTAACTGGTCC} \underline{{\tt TGA}}{\tt GCTCCCACCCAACGCTCCATTTTCTGTTGG}$ CATCCGCCTGGCCAGGCAGTGGCATCCAAACCACCCGGAGCCGCGATCTGAGGAGGCCTGGCACCTCCTTGGAGT TTACGCTCAGATGCCCGTGTGCTGCTTGGAAAGTGGTCGAGTCCCGCGTGCAGTGGGGAGCCCCAGGTGACAGTG GTTATCTGAGACGGCTCCACCTCGGGAGGAGGCCCACCTGGACCTCCACTCAGAGGAGCACGCGCGTGTA TTGGTAAGAGAGGGAAGCTGCTCCCCGTCAGAACCACAGTGCGCCGTGCGAGGGGCACTGTCTTCTTCATGCTCC CTGGAGCACCAAAGAAACGTAAACAATACCCCACGAAAGCAGGGTCAGGGTCAGGGTGCGATCGAGACCCA GGATGGGGGCGTCCAGTCATGCCCACCCCAGCATCACAGGAGACATGGAGGTGCGGGCAGGCTCCTGAATTATTA TGCAAATTAGGAGGACGCAGGAGGGGTCTGCCCTCCAGCCGAACACCACACTGGACCCTAAGTGGCCAAATGC

6439/6881 FIGURE **5943B**

CTGGGCCGCTTGCTGGCTGTGGCCTGAGGCTTGTGGGTTGCTGCATTTTGCTTGTAGTTCACAACCATTTTGACA CTGGAAAATGCTGACTTTGGGGGACAGGATGAGGCCCTACATTCTAAGCCCCCAGTTGGCAGACAGGCATTGTCC CTGTTCCACATTTATGTCGGGACAGGAGATGACCTTTTCCTCCGTGTTTTTCCTGTGTTTTGCACGTTGAAATGAA GCTGACAACCTGGCAAGACGCTCAGCCGCTTCAAACCCTTTTTGTCAATTAACTTATTTTTTAATACTTGAAAAG AAGTAACTTCGTTTGTGTATCTTTACTAGAGGAACTGATCACCTGCGCCCGGGTGCGGGAGCCACAGCGGCATCT TATCACTGGCCTGGCATCAGGGAGCTGCCCAGAACCCCTGTGTGGGTCCTCCTCACAGCTTTCTGTCCCCT CCTCCACCCGGTGCCTCACCCTGGCGCTAGACCATCTGGACCACTCATGTGATGAGGGTGCATTTCCGTTC TGTTTTGGGCCAGGCCAACAGCAGAGCTGCCACTCTCACCCTCCCAGTGAGAATTCCGGCTCTGCAGAACTCGCC CTTGTCTCAGTTTGGGGGCCAGGGCATCACCTTCCTCCGCACATATGTTAAAGAAGGTTTCAGGATGGGCCCTCA TCCACACAGGCCAAGAGGTGCAAGGTGGGACCCTGGAATCATGTGGCTGAGAATTCCCTCCTCCCAGCCTA AGATTCACCCAGACGGAAACGCGAGTGCTGCAGTGGATGCTGGGATGCAGGCTGGTGCCTCTCAAGCAGATCAGC GACTCCCGCCCTTCCTTCCGAAGGCGACGGGCACCTGCCTTGTGCCGGATCTTCATGGGGACATAAAGGGCGAGC CCCGAATCACTAGCTCCTATAGCCAAACTGTTCCTTTCTCACGGTTCCGCACCAGCCTGGCTGTTACAGCTCAT CAAGCCACTGAGCTAATCGGGGTGGGTGCTTGTCCATCAAAGCAGTCAGCACATAGCCCAGCGAGGAGCCATCC GGACCAGACCCGCCTGCCAGGGGGCGCTCCAGCCGCCTGCCGCCTCCGTGGGCCTGGGGCCAGCTGGGAGCAGAGGC CTGGCCCCTCCAAGGCGTCCCGCAGTGGAGCAGGCTGAGTGGCTGTGCTGACCTTGGGCTTTCCATGGGAACCAC CTGCCATCTCTCTCCCATGCACATCCGGGAGATAACGCCGCTAGTGGCCGCCACAGCGCTGATTCTCCACCTGTT CTCACGTGAGGCAAAGGTCTCCTTTTCTTTTCTCTTTACTTAAAAAAGGGGAGAGGAGGGGTTTCTAGATTCCATC TCCTCGAATGCCACAAAACCGGTCCAGCCCCGGCAGAGCCGCCTTCGGCCCCTTGTAGCTCCTGCTGGCCCCACAA CAGGGAAACAGTTTGCAAAGTGGCTTGGAAGGAGTGTGGCCTAGGGATCTGCTGTAAGTGGCCAGACGTAGCAGG AGAGCCCAGTGTCACCTTCTGGTCCTGGTCAGCCTTAACACTGTGGCATCCTCCACAGCACACACGGCAGCCTGC AGTCTGGAAGGTGGACCCGAGCCTTTGCAGAGAGGCGCCGCAGAGCCGCAGGCCTGCGCCCCAGCCTTCTGCTCC CGACTGTGAGGACACCCAGTTCTAGTAGAGCACTTTTTTTAAAGCTCCCATTTTGTAACCACTAGTTTGCGGTTG AGGTGCGGGAGCAGCCCAGACTCAAGGCTGACTAAACTGGAGGCTGAATACCGTGGAGGTCCACATGCAGCTTCC CTGGAGGGCAGGCCGGAGGCGCCCCCGGGCCTTGAGGATGCTGCACCCCGTGGGCTTCCAGGCCTGCCCA GATGATGCCTTCAGGCCTCTGTCCCTGGCGGCCATCCTCAGGCCGATTTTGACCAGCAATGATAGACTCTTCTTA ACCCTTTCAAAATAAATTTTTCAGTGGGACAGAAAGGAGAGTTAAAAAACATTTTTTTAAAGGTGGTAACATCTG ACCCACAAAGGGAATGGGTCTGTTTTATGCAAAATAAAAGTTTTTCAAAT

MHAADPLEIQADVHWTHIREREEEERMAPASESSASGAPLDENDLEEDVDSEPAEIEGEAAEDGDPGDTGAELDD DQHWSDSPSDADRELRLPCPAEGEAELELRVSEDEEKLPASPKHQERGPSQATSPIRSPQESALLFIPVHSPSTE GPQLPPVPAATQEKSPEERLFPEPLLPKEKPKADAPSDLKAVHSPIRSQPVTLPEARTPVSPGSPQPQPPVAAST PPPSPLPICSQPQPSTEATVPSPTQSPIRFQPAPAKTSTPLAPLPVQSQSDTKDRLGSPLAVDEALRRSDLVEEF WMKSAEIRRSLGLTPVDRSKGPEPSFPTPAFRPVSLKSYSVEKSPQDEGLHLLKPLSIPKRLGLPKPEGEPLSLP TPRSPSDRELRSAQEERRELSSSSGLGLHGSSSNMKTLGSQSFNTSDSAMLTPPSSPPPPPPPGEEPATLRRKLR EAEPNASVVPPPLPATWMRPPREPAQPPREEVRKSFVESVEEIPFADDVEDTYDDKTEDSSLQEKFFTPPSCWPR PEKPRHPPLAKENGRLPALEGTLQPQKRGLPLVSAEAKELAEERMRAREKSVKSQALRDAMARQLSRMQQMELAS GAPRPRKASSAPSQGKERRPDSPTRPTLRGSEEPTLKHEATSEEVLSPPSDSGGPDGSFTSSEGSSGKSKKRSSL FSPRRNKKEKKSKGEGRPPEKPSSNLLEEAAAKPKSLWKSVFSGYKKDKKKKADDKSCPSTPSSGATVDSGKHRV LPVVRAELQLRRQLSFSEDSDLSSDDVLEKSSQKSRREPRTYTEEELNAKLTRRVQKAARRQAKQEELKRLHRAQ I IQRQLQQVEERQRRLEERGVAVEKALRGEAGMGKKDDPKLMQEWFKLVQEKNAMVRYESELMIFARELELEDRQ SRLQQELRERMAVEDHLKTEEELSEEKQILNEMLEVVEQRDSLVALLEEQRLREREEDKDLEAAMLSKGFSLNWS

CGGGAAGATGGCGGGCCGGGCGACTTGAGATCCGCGGGTCTCCCTGCTCCTTTTCCGTCTGCGTCGGGAGCTCCC GGGCACGTGAGGCCGTGCCGCGTTTACTGGCGGGAGGGACGGCCTAGCCGGGCGACGCCTCGGAGGAGGCCGCGG AGTCTCCTCCTGCACCCGACGGAGGACCCCATCAACGTGGAGGGCCTGCTGCCATCAAAAATAAGGATTAATT TAGAAGATAATGTACAATATGTGTCCATGAGAAATCTGCTCCCGGGGGTATTCTTGACTTAAACAAGGTTGCAAC GAAACTGGGAGTCCGAAAGCGGAGAGTGTATGACATCACCGATGTCTTAGATGGAATCGACCTCGTTGAAAAGAA ATCCAAGAACCATATTAGATGGATAGGATCTGATCTTAGCAATTTTGGAGCAGTTCCCCAACAAAAGAAGCTACA TGAGTTAACAGATGACAAAGAAATGAAAGACTAGCATATGTGACCTATCAAGACATTCATAGCATTCAGGCCTT CCATGAACAGATCGTCATTGCAGTTAAAGCTCCAGCAGAAACCAGATTGGATGTTCCAGCTCCCAGAGAAGACTC TATCACAGTGCACATAAGGAGCACCAACGGACCTATCGATGTCTATTTGTGAGAAGTGGAGCAGGGTCAGACCAG TAACAAAAGGTCTGAAGGTGTCAGGACCTCTTCATCTGAGAGCACTCATCCAGAAGGCCCTGAGGAAGAAGAAAA TCCTCAGCAAAGTGAAGAATTGCTTGAAGTAAGCAACTGATGGCATTTGAGAATTTATGTATCACTGAGTTTTTT GGGAATATCTTCGTGGAGAATTACGCATCAAATTTGATTCTCAGAGCAATAAATTATCCATGAAGTGCTCTCGTT CTCAGTAGCGGCATCATGGCCAGTAGTGTCTTTGAGGAGTTCACCACTTAGATTACTGAGTAATTGTGGTTTCCA CATTTGAAAACAACTCCTTTTATAATTATTCACTGCTTTTTTGTCAGTGAAATAGACATCTTGCCTCCTGAAGTAG CTTCATCACAGAGTGTCATGAAGACAGACAGTCAGGCTGAAAAGGACAGTTCTTTGTGGACTCTACCCTTCCCTT CAAGGAGTATGTCATATGTCACAAAAGAAATTGCCTTACACTGGTTCATGTTTGCAGTTACTGTTGTACATTGCA TTTGGTATCTATAACTTATTAGAATCCTCTGGATGAGGGTTAGAAGAGACTTTTTCCAAACTTCTACATGTAGAA TGGAGTCAGATACTTCTTGGTTTTAAGCTGTCTACCTAATTGCTGTCTCCCAGCAGATCGGTGGCATGCCCAGTG GCTTTGGGGGCAAGGATAGAATGCCATCAGGAAATAGCTGAATTCATTGTGAAACATGAATTCAGTCATGGTGA TAATTGGAAACTCCTTTCAGGTTTTTGCAAGTAGATTTTGTAATGTTTGTGTATGCAGCCTTGCTGTTGAGTCAG TCCAAGGGGTTTTACTTAGGACAAGTTGTACCTTGCCCTCTCTCCAGCTCTGCTCCCACATTTTCACATACCTAG CTATTTCTACCTCATTGGGTAAGTCATTTACCACTCTGTGCCTCAGTTTACTCTGTAGTTTACCATTAGACTGTG AGCTCCTTGAGGGACTTTGTCATAATCACTGTTACATCCCAGTGCCTCACACTATGCCTGGCCCTTAAGAAGTGC

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MGSGPRGALSLLLLLLAPPSRPAAGCPAPCSCAGTLVDCGRRGLTWASLPTAFPVDTTELVLTGNNLTALPPGLL DALPALRTAHLGANPWRCDCRLVPLRAWLAGRPERAPYRDLRCVAPPALRGRLLPYLAEDELRAACAPGPLCWGA LAAQLALLGLGLLHALLLVLLLCRLRRLRARARARAARLSLTDPLVAERAGTDES

GGTGATGTCCAGGTTTCCTGCACAGGTAGGGTGGAGGCAACGATGGACTCTGGCATGGCCTTCCAGACAGGCAGT GCTTTCCTGCTGGGGGAAGGAGGCATTCCCCCTGGGTTGTTTTTCTCTTCTGGCCCCCACACACTGGCAGACCCG AAGGCAGGGTGCTCAGGAGCTGCAGAGCCTGGCAGGGTTTGCTGGACATGCTCAGGGACGGGCCATGGTGCTGGC TCTGCTTTCTAATCATGGTGTCAGTCCTTCACTTCCCTTGGAAATACCCAGAGATTTTATTTCCTGAAGATAGGA ... CATGATGGGTGCTGTGAGATGGTATTTAAAGTACCTGTCTGCAAGGAAAACTTTAAAATAGGAAGTACTAAGGAT AAGGTCCTATGGGATATTGGAATATTTTATAAAGCCACAATAGTTAAAGCACTTAGATGTGGACAGATGAGCAGA GAATAGAGGACTTTGAAACGGGCCAAATAAATATGGAAATTTAGTACAGGCTAGAGGTGTTTCCAATTAACGAGT CAGTACATATTCCAGATTAAAGATTTCAATGTTACAATTATGAAAGTACTAGAGGAAAATATGGGTGAATTTTTT TTTTTTTTTTTTTTTTCCCTATGATTCCAGGATTTTAAAAGTTTTAGATGCCCAGAGTTGTGGAGGTATGGAGAAG $\verb|CTGTGACTACTTGCTAGGTGCATGAAGGCTCTTGCCAGGGGTGGTCATGGTTCGGTACCACTACATGGGGGGTTTA||$ GAGCAGGGACTGGAGGTTGGCCTTGCCTCCCCTCCCCGCATGAGCTGAGGGTCCTTACCTGACCTTTTTGAG CTGTGACCAGAGTTTTTCCTCATGGGGTGGTTAGAAGGGTTGAATGAGAATGATGCCCATGCAGTGCCTTGGCTG GGGTCTGGGCCCTCTAACACCCACCTCATGGGTGTCACTGTTTTTTGAACAGCAGAACTGGAAAAAGCCCAAAAGAT GCTGGGGCCTGTCAGACCTGTGCTGACGACAGCCTACCTGGACATATTTCTCCATGCTCACTGAGGCAGGGGAAA GGCCACAGCAGGCCACAAGTAATGTGTGTCACCCCACTTCCATTTCTGTGGCCAAAGGAAGCCACAGAGCCACAC CCCAGCGTGGGGCTGGTTGGTGCTGAGGATGGGAGGATGGGAGGGGCCTGCATCCCATCCCAGGGCAACATAC CTGTTTGTCTGCTGGGGCTGCCTGACAAAGGACCGCAGGCTAGGGGACTTAAACAACAGACATTTCCTCATGATT AGCCATCTTCTTGCCGTGTCCCTGTCTGTGTCTGTGTCCTAATCTCTCATAAGCTCACTAGTCTATTGGATCAGG GCCCACCCTCATGACCTCATTTAACCCTGAATTACCTCTTTAAAGACCCTGTCTTCAAATGTAAGTACTAGGGGT TAGGACTTGAACATAAAAATATTGAAGGGACATAGTTCTGCCCACAGCGGTGCCCGCGATAGGCTTCTCTGGTTT TGTCTTTGCTGTTCCTGGCAGCGCTATATTGGGCAGGCTTCTGTGGTCTCCACATGCCTGTGTGCAGAGTCCCCC AGGCCCTGGGTTCTGGGGCCCATACTGAGGAGTGGGGATGGCCAAGCCTTGGCTGTTGAGTAGGCAGTGCCCAGT TGTGCTGTATGGGATGCTGTTTCTCACTTAAGAAATCTTTCCCTACCTGGGGGGTACAAAGGCATTATCCTGTAT TCCCAGGTTGTAACTTTCTGCCTTTGACATTCAACCTTGAGTCCACCTGTAAGTGTAACTGCGGCAGAAGGGAGG GGTCTGCTGTCATCCTTGATAGCCTGTGATGAGCAGAGCCCCTCTGCCGACCGCGATGCACATGTAATATGAGCA AGAAATAAATTTTTGATGTGCGAAGCCACTG

GGCACGAGGCTCCCTGTGCTCCCAGCATGCCTCGTGGCCGTGCCGTCAGCAGGGCCCTCGCATTCCCATCTGG GCAGCCGCCAATTATGCCAACGCACATCCATGGCAGCAGATGGACAAGGCGTCTCCTGGGGTGGCATACACCCCC ACAGCTAGTGGCACTTGTGGCGGTAAACCTGCAGAAAGGGGTCCCCTAGCTGGGCACATGCCCAGCTCCCGACCC CACAGGGTGGACTTCTGCTGGGTACCAGGCTCAGACCCAGGCACCTTTGATGGCTCCCGTGGCTACTGGACCGC TTCTTGGCCCAGCTGGGCGATTACATGTCCTTCCACTTTGAGCACTATCAGGACAACATCAGCCGTGTCTGCGAG GATTACGAGCTCTTCTGCCAGGATCTCAAGGAAGTTGTTCAAGACCCGAACAGTTTTGCTGAGTACCATGCTGTG GTTACCTGTCCCCTGCCCTCGCCTCCAGCCGCTGCCAGTGGCCCCTCAGCTGCCTGTGGTGAGGCAATACTTA GCTAGGTTCTTAGAGGGCCTGGCACTCGACATGGGTACTGCCCCCAGGTCTTTACCAGCCGCCATGGCCACCCCT GCTGTGTCTGGGTCCAACTCTGTATCTAGAAGTGCTCTGTTCGAGCAGCAGCTGACCAAGGAGAGCACCCCTGGG CCCAAGGAGCCCCAGTCCTGCCCAGTTCTACATGTAGCTCCAAGCCTGGTCCTGTGGAACCAGCCTCTTCCCAG CCAGAGGAGGCAGCCCCACACCTGTCCCTAGACTGTCGGAGTCAGCTAATCCTCCTGCCCAGAGACCAGACCCA GCTCATCCAGGAGGTCCAAAACCCCAGAAAACAGAGGAGGAGGTTTTGGAGACAGAGGGAGACCAGGAGGTGTCC TTAGGTACCCCACAGGAGGTGGTGGAGGCCCCGGAGACCCCAGGAGAGCCACCACTTTCTCCTGGGTTC<u>TGA</u>ACA CAGCCCAGGTGGGAACAATGCTGCCCCTCATGATGAAGTGGCCTGTGTGGCTTGAGCGCCCCATAGTCCCCAGTC AGAGCAGAGTGGTGTCCCCAGATGACTTCAGACCCCATAGCTGGGCAAGATGCGCTTGTTTTGGACTCTGCGCTG AGCAGAACCAGCTCCCCCAACTCCAGCAGAGCTTGACCTCCGCCCTGTGCCCTTTCCCTGCTGCTGGCTCTCTGC TGCATCCCTGCCCGTCTTCTGGGAGTGCCGTCTCACCCAGGCCTGCTCCCACGAGGGGGTCGTTTTGTAGATCAA CTCTCAGCAGATAGTTGCATCATCTTTGTCACCTCCACCCCCATAAAACACCCCCCTTGGTGTCTTCCACACTGG CTGGGACTGAACTGGGTCTGCCACGTCTGCCCTGTTGGGACCTCGTTCCTGTATGGGGTTTCTGTCTCTCCCC CTAGCCCCACCTCTCTGCTCCCTGTGACTTCTGTCCCAGCTGGAATGTGAGGAAGGCTGCCTGGAGGAAGTGGC CACTTTGATTCTGGGGGATGAGTGGGATAGCATCTTGGCAAAGAATGATGTTTCCTGTGGGATTACCAGCAGTTC TGGGCAGCTGGAAGGTTTGGATGCAGGAAGGTGGGATGCAAGCCCCTTGCCAGGCTCAGCTGCAGGCATTCGCCC TTTGTGTGTTAACACTGTAGCTCTAATCGTGCCTGGTGTTCTGAAGCAGGCTCCTCTTCCCTGCTGCTGCTGCTGC CATCCCTGCTCACTCGCACTCGCATGCATTGCGGATTCAGCACTTAAGCCCTAGTGTGTAAATGACTTGGATC TCCCTCCTGGCAGACTGTGACCCTCAGCACAGGGGCTCTGTCTTAGTCAGCTCTGTGGCCTGGTACACAATTGGT

MEQKSTASGTCGGKPAERGPLAGHMPSSRPHRVDFCWVPGSDPGTFDGSPWLLDRFLAQLGDYMSFHFEHYQDNI SRVCEILRRLTGRAQAWAAPYLDGDLPLPDDYELFCQDLKEVVQDPNSFAEYHAVVTCPLPLASSQLPVAPQLPV VRQYLARFLEGLALDMGTAPRSLPAAMATPAVSGSNSVSRSALFEQQLTKESTPGPKEPPVLPSSTCSSKPGPVE PASSQPEEAAPTPVPRLSESANPPAQRPDPAHPGGPKPQKTEEEVLETEGDQEVSLGTPQEVVEAPETPGEPPLS PGF WO 2004/030615 PCT/US2003/028547

6449/6881 FIGURE 5953

ATTCCCCACACCCTATCCCAGTGTTCCACCCTAGGTCTGAAGGCCCCCGCCCCGAATCCGGCCGCATTCGGCCCC GGTCTAGCCAGCGCTCTCACCTCTCCCGCGACGGCCCCGGGACTGGACCCGCCCCGGTCCGGCCAGGCAGC ${\tt GCGGCGGGCAGCCCTAGCTGCCCCAGAAGCCCCACGACGATGGCGGCAATGGCGGTGGCGCGGGGATTAGGA}$ CGGGACTATGATCTCCTGGTGGTCGGCGGGGGATCTGGTGGCCTGGCTTGTGCCAAGGAGGCCGCTCAGCTGGGA AGGAAGGTGTCCGTGGTGGACTACGTGGAACCTTCTCCCCAAGGCACCCGGTGGGGCCCTTGGCGCACCTGCGTC AACGTGGGCTGCATCCCCAAGAAGCTGATGCACCAGGCGGCACTGCTGGGAGGCCTGATCCAAGATGCCCCCAAC TATGGCTGGGAGGTGGCCCAGCCCGTGCCGCATGACTGGAGGAAGATGGCAGAAGCTGTTCAAAATCACGTGAAA TCCTTGAACTGGGGCCACCGTGTCCAGCTTCAGGACAGAAAAGTCAAGTACTTTAACATCAAAGCCAGCTTTGTT GACGAGCACACGGTTTGCGGCGTTGCCAAAGGTGGGAAAGAGATTCTGCTGTCAGCCGATCACATCATCATTGCT ACTGGAGGGCGGCCGAGATACCCCACGCACATCGAAGGTGCCTTGGAATATGGAATCACAAGTGATGACATCTTC TGGCTGAAGGAATCCCCTGGAAAAACGTTGGTGGTCGGGGCCAGCTATGTGGCCCTGGAGTGTGCTGGCTTCCTC ACCGGGATTGGGCTGGACACCACCATCATGATGCGCAGCATCCCCCTCCGCGGCTTCGACCAGCAAATGTCCTCC ATGGTCATAGAGCACATGGCATCTCATGGCACCCGGTTCCTGAGGGGCTGTGCCCCCTCGCGGGTCAGGAGGCTC CCTGATGGCCAGCTGCAGGTCACCTGGGAGGACACCACCGGCAAGGAGGACACGGGCACCTTTGACACCGTC CTGTGGGCCATAGGTCGAGTCCCAGACACCAGAAGTCTGAATTTGGAGAAGGCTGGGGTAGATACTAGCCCCGAC ACTCAGAAGATCCTGGTGGACTCCCGGGAAGCCACCTCTGTGCCCCACATCTACGCCATTGGTGACGTGGTGGAG GGGCGGCCTGAGCTGACACCCATAGCGATCATGGCCGGGAGGCTCCTGGTGCAGCGGCTCTTCGGCGGGTCCTCA GATCTGATGGACTACGACAATGTTCCCACGACCGTCTTCACCCCGCTGGAGTATGGCTGTGGGGGCTGTCCGAG GAGGAGGCAGTGGCTCGCCACGGGCAGGAGCATGTTGAGGTCTATCACGCCCATTATAAACCACTGGAGTTCACG GTGGCTGGACGAGATGCATCCCAGTGTTATGTAAAGATGGTGTGCCTGAGGGAGCCCCCACAGCTGGTGCTGGGC CTGCATTTCCTTGGCCCCAACGCAGGCGAAGTTACTCAAGGATTTGCTCTGGGGATCAAGTGTGGGGCTTCCTAT GCGCAGGTGATGCGGACCGTGGGTATCCATCCCACATGCTCTGAGGAGGTAGTCAAGCTGCGCATCTCCAAGCGC ${\tt TCAGGCCTGGACCCCACGGTGACAGGCTGCTGAGGG\underline{TAA}_{\tt GCGCCATCCCTGCAGGCCAGGGCACACGGTGCGCCCC}}$ GCCGCCAGCTCCTCGGAGGCCAGACCCAGGATGGCTGCAGGCCAGGTTTGGGGGGGCCTCAACCCTCTCCTGGAGC GCCTGTGAGATGGTCAGCGTGGAGCGCAAGTGCTGGACAGGTGGCCCGTGTGCCCCACAGGGATGGCTCAGGGGA CTGTCCACCTCACCCTGCACCTCTCAGCCTCTGCCGCCGGGCACCCCCCCAGGCTCCTGGTGCCAGATGATG ACGACCTGGGTGGAAACCTACCCTGTGGGCACCCATGTCCGAGCCCCCTGGCATTTCTGCAATGCAAATAAAGAG AAAAA

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GGGCGGTCCAGTCCCGGGCGGCCGTCGCGGAGAGAAATAACATCTGCTTTGCTGCCGAGCCAGAGAGACCC CAGACCCCTCCGCAGCCAGAGGGCTGGAGCCTGCTCAGAGGTGCTTTGAAGATGCCGGAGGCCCCGCCTCTGCT GTTGGCAGCTGTTGCTGGGCCTGGTGCTGCTGGTGCTGCTGCTGCTTCTGAGGCACTGGGGCCTGGGGCCT GTGCCTTATCGGCTGGAACGAGTTCATCCTGCAGCCCATCCACAACCTGCTCATGGGTGACACCAAGGAGCAGCG CATCCTGAACCACGTGCTGCAGCATGCGGAGCCCGGGAACGCACAGAGCGTGCTGGAGGCCATTGACACCTACTG CGAGCAGAAGGAGTGGGCCATGAACGTGGGCGACAAGAAAGGCAAGATCGTGGACGCCGTGATTCAGGAGCACCA GCCCTCCGTGCTGCTGGAGCTGGGGGCCTACTGTGGCTACTCAGCTGTGCGCATGGCCCGCCTGCTGTCACCAGG GGCGAGGCTCATCACCATCGAGATCAACCCCGACTGTGCCGCCATCACCCAGCGGATGGTGGATTTCGCTGGCGT GAAGGACAAGGTCACCCTTGTGGTTGGAGCGTCCCAGGACATCATCCCCCAGCTGAAGAAGAAGTATGATGTGGA CCTGCTGCGGAAGGGGACAGTGCTACTGGCTGACAACGTGATCTGCCCAGGTGCGCCAGACTTCCTAGCACACGT GCGCGGAGCAGCTGCTTTGAGTGCACACACTACCAATCGTTCCTGGAATACAGGGAGGTGGTGGACGCCTGGA ${\tt GAAGGCCATCTACAAGGGCCCAGGCAGCGAAGCAGGGCCC} \underline{{\tt TGA}} {\tt CTGCCCCCCGGCCCCCCTCTCGGGCTCTCTC}$ ACCCAGCCTGGTACTGAAGGTGCCAGACGTGCTCCTGCTGACCTTCTGCGGCTCCGGGCTGTGTCCTAAATGCAA AGCACACCTCGGCCGAGGCCTGCGCCCTGACATGCTAACCTCTCTGAACTGCAACACTGGATTGTTCTTTTTTAA GACTCAATCATGACTTCTTTACTAACACTGGCTAGCTATATTATCTTATATACTAATATCATGTTTTAAAAAATAT AAAATAGAAATTAA

MPEAPPLLLAAVLLGLVLLVVLLLLRHWGWGLCLIGWNEFILQPIHNLLMGDTKEQRILNHVLQHAEPGNAQSV LEAIDTYCEQKEWAMNVGDKKGKIVDAVIQEHQPSVLLELGAYCGYSAVRMARLLSPGARLITIEINPDCAAITQ RMVDFAGVKDKVTLVVGASQDIIPQLKKKYDVDTLDMVFLDHWKDRYLPDTLLLEECGLLRKGTVLLADNVICPG APDFLAHVRGSSCFECTHYQSFLEYREVVDGLEKAIYKGPGSEAGP

MGDTKEQRILNHVLQHAEPGNAQSVLEAIDTYCEQKEWAMNVGDKKGKIVDAVIQEHQPSVLLELGAYCGYSAVR MARLLSPGARLITIEINPDCAAITQRMVDFAGVKDKVTLVVGASQDIIPQLKKKYDVDTLDMVFLDHWKDRYLPD TLLLEECGLLRKGTVLLADNVICPGAPDFLAHVRGSSCFECTHYQSFLEYREVVDGLEKAIYKGPGSEAGP

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6456/6881 FIGURE **5960A**

AGAAGAAGAAGGTGCCACTCCGGCATGAAGACAGACTCGCTTAGTCGCCAGTCACTTAAGCTGAGTGCATTGTG ATTTCCAATAATTGAGGCAGTGGTTCTAAAAGCTGTCTACATTAATGAAAAGAGCAATGTGGCCAGCTTGACTAA GCCGCCAGCGCACAGCGCGCAGGACGCCCCGGGTCTCAGCGGACTTGTGCATGTTAGCTGTGTAGATTTATGT GAGGGCTTGTAAAACTCTGGTCTTGTAAACTAGTCTTAAGCGCTTTTAATATGGAGACAGATGAGAGCCCCTCTC CGCTCCCGTGTGGGCCCGCAGGAGAGCGGTGATGGAGAGCCGAGCTCGCCCCTTCCAAGCGCTGCCCCGTGAGC AGTCTCCACCACCTCCCTGCAAACGTCCAGTGGTGCAGAGGTAATGGACGTTGGCTCTGGTGGTGATGGACAGT GCCTCCTCATAGACCCGAACTGTAGTGGCCACAGCCCGCGCACCGCCCCGGCACCTGCGGTCCGGAAGTTCT CCCCTGACCTTAAGTTGCTTAAGGATGTAAAGATTAGCGTGAGCTTTACCGAGAGCTGCAGGAGTAAGGACAGGA AGGTGCTGTACACAGGAGCAGAGCGCGACGTGCGGGCGGAGTGCGGTCTGCTCCTTAGCCCTGTCAGTGGGGACG TGCATGCTTGTCCCTTTGGCGGGAGTGTTGGTGACGGGGTAGGCATAGGGGGTGAGAGTGCTGATAAGAAGGATG AGGAGAATGAGCTGGATCAGGAAAAGAGAGTGGAGTATGCAGTGCTCGATGAGTTAGAAGATTTTACTGACAATT TGGAGCTAGATGAAGAAGGAGCAGGCGGGTTCACGGCTAAAGCAATCGTTCAGAGAGACAGAGTGGATGAAGAGG CCTTGAATTTCCCCTACGAGGATGACTTTGACAACGATGTGGATGCTCTGCTGGAAGAAGGCCTTTGTGCCCCCA TGATGACCAAGATTAAAACAGTGCTCAAAAGTACGTGGCCGCCCACCTACAGAGCCGCTGCCCGACGGGTGGATC ATGACATTCCATAACTCTGGAGTCCCGGTGTACCTACACAGAGAGTCTCGGGTGGTCACCTGGTCCAGGCCATAC TTCTTGGGAACGGGAAGCATACGGAAACACGACCCTCCTCTGAGTAGCATCCCTTGTCTGCATTATAAGAAAATG AAGGACAACGAGGAACGGGAGCAAAGCAGTGACCTCACCCCTAGTGGGGATGTGTCCCCCGTCAAGCCCCTGAGC CGATCTGCAGAGCTGGAGTTTCCCCTGGATGAGCCTGACTCTATGGGTGCTGACCCGGGGCCCCCGGACGAGAAA GACCCACTAGGGGCTGAGGCAGCCCCTGGGGCCCTGGGGCAGGTGAAGGCCAAAGTCGAGGTGTGCAAAGATGAA TCCGTTGATCTCGAGGAATTTCGAAGCTACCTGGAGAAGCGTTTTGACTTTGAGCAAGTTACTGTGAAAAAATTC AGGACTTGGGCTGAGCGGCGCAATTCAATCGGGAAATGAAGCGGAAGCAGGCGGAGTCCGAGAGGCCCATCTTG ${\tt GGGAAATCCGAGGTCTGCATCCTGCACGAGTACATGCAGCGTGTCCTCAAGGTCCGCCCTGTCTATAATTTCTTT}$ GAATGTGAGAACCCAAGTGAGCCTTTTGGTGCCTCGGTGACCATTGATGGTGTGACTTACGGATCTGGAACTGCA AGCAGCAAAAAACTTGCGAAGAATAAAGCTGCCCGAGCTACACTGGAAATCCTCATCCCTGACTTTGTTAAACAG ACCTCTGAAGAGAGCCCAAAGACAGTGAAGAACTCGAGTATTTTAACCACATCAGCATCGAGGACTCGCGGGTC TACGAGCTGACCAGCAAGGCTGGGCTGTTGTCTCCATATCAGATCCTCCACGAGTGCCTTAAAAGAAACCATGGG ATGGGTGACACGTCTATCAAGTTTGAAGTGGTTCCTGGGAAAAACCAGAAGAGTGAATACGTCATGGCGTGTGGC AAGCACACAGTGCGCGGGTGGTAAGAACAAGAGAGTTGGAAAGCAGTTAGCCTCACAGAAGATCCTTCAGCTG CTGCACCCACATGTCAAGAACTGGGGGTCTTTACTGCGCATGTATGGCCGTGAGAGCAGCAAGATGGTCAAGCAG GAGACATCGGACAAGAGTGTGATTGAGCTGCAGCAGTATGCCAAGAAGAACAAGCCCAACCTGCACATCCTCAGC AAGCTCCAAGAGGAGATGAAGAGGCTAGCTGAGGAAAGGGAGGAGACTCGAAAGAAGCCCAAGATGTCCATTGTG GGCCGCCAGCCGCACTTCTGAGGAGACCAGCAGTCATGCATCGTGCACCACAGTGTCAGGCCTCCAACCCACGCT CCTTCCCTGTGGCCAACCTGTGGGCCCGGCCTTAGGGTGGAGGCTTTAGTGTACAGGGACAGCCATGGCCACACA CAGCTGGTGACTGTGGACAGTGGTGGACCCTGCTTCTGTGCACCTGCTGCAGGCTCTTTTTATGAAGGCTTTCAT GAATTTTAGTATGTAATACGCACTGACGACACATGATGCTTGGATGACAGATGAGAGGGGATGGCTGAGTCCTGT GGCTGGCCCGTGATGCCAGGTGGCCCATGTGCCCAGGGCGCCTGCAGGGCTGCTACAGGGACCTGGTCAGGAGGT GCACATGGTGCCCTGCCCTCACCCCCCTCTGTGTTTCCCCTTCTTTGAAAAGGTAGAAGAGAAAAGGAATATTTT AAACCTTTTTGGCTTAAACAGAATTTTAGCATCAGAACTAGCTTTCTGGGATTGGAGGCAAACCATCAAGGTGGT CCCTCTCCAGTCTGGACACGATGCCAGCAAGGATGACGTCCTGCCACCTCCTGGAGTTACCCTGGCCTCCTAGGG TCCCTTTTTCTGATGAAGTCTTAATTCCCTAAAAGCGCCTCTTTGGACACTGAGGCCCTCTCTGCCTTTCCTGGC CTCCGGCAACAGTTTTTTACAAAGATTTTTTGCAGTCGAGTCCATATGTCCACCCATTGATTTTTAAAGCTTTTG TGATATTTTAGCATTTTGAAAGACTTTCACAGTGAGAGTAGAAGGTAGAATTTGGAATCATGCATTTTAGCAAGTG

6457/6881 FIGURE 5960B

CGAGCGGCCGGCGCGCCCTGGCGGGCGGCGGTACAGCCCCAAGCCTGAGACCCGGACCTGAGCATCGCAGG TTCGAGTCCCGCCCGCCTGGGGGGAAGCCGGGGGTGGCGGCGACCTCGCGGCGTTGCACCGGCTCTGTGAGCAC CTCCCCTCTGAGCACTTCCCTTGTGACAGGCCACTTCCCTTGTGACAGGCCCAGGACGAGGTGGCCAGGCGGCCC CCATGGCGTCCCTGGTCTAGGCGGAGAACCGCCTGGGCG<mark>ATG</mark>AGTGAGAACCTCGACAACGAGGGCCCGAAGCCC ATGGAGAGCTGTGGCCAGGAGAGCAGCAGTGCCCTGAGCTGCCCTACCGTCTCGGTGCCCCCTGCAGCCCCGGCA GCCCTGGAGGAGGTGGAGAAAGAGGGCGCTGGGGCGGCTACAGGGCCGGGGCCTCAGCCCGGGCTCTACAGCTAC ATCAGGGATGACTTGTTTACCTCTGAGATCTTTAAACTGGAGCTGCAGAACGTGCCTCGCCACGCCAGCTTCAGC GACGTCCGGCGCTTCCTGGGCCGCTTTGGTCTGCAGCCCCACAAAACCAAACTCTTTGGGCAACCACCCTGCGCC TTTGTGACATTCCGCAGCGCTGCAGAGAGGGACAAGGCCCTGCGCGTTTTGCATGGTGCCCTCTGGAAAGGCCGC CCACTCAGTGTGCGCCTGGCCCGACCCCAAGGCCGACCCCATGGCCAGGAGGAGGCGACAGGAGGGTGAGAGTGAG CCACCAGTAACACGAGTGGCCGACGTGGTGACCCCTCTATGGACAGTGCCCTATGCTGAGCAGCTTGAGCGGAAG CAGCTGGAGTGCGAGCAGGTGCTGCAGAAACTTGCCAAGGAAATCGGGAGCACCAACCGTGCCTTGCTGCCCTGG CTGCTCGAGCAGAGCACAAGCACAAGGCCTGCTGCCCGCTGGAGGGGGTCAGGCCATCACCCCAGCAGACT GAGTATCGTAATAAGTGTGAGTTTCTGGTTGGCGTCGGGGTGGATGGGGAGGATAACACCGTGGGCTGTCGGCTC GGCAAGTACAAGGGCGGGACGTGTGCTGTGGCAGCCCCGTTTGACACCGTGCACATCCCCGAAGCCACCAAGCAG GTGGTGAAGGCCTTCCAGGAGTTCATCCGGTCCACTCCATACTCGGCATACGACCCAGAGACGTACACAGGCCAC TGGAAGCAGCTGACTGTGCGCACCAGCCGCCACCAGGCCATGGCCATTGCCTACTTCCACCCCCAGAAGCTG AGCCCTGAGGAGCTGGCAGAGCCTGCAGGCCAGCCACTTCACAGCAGGCCAGGCCAGGCCAGTGGA GTGACCTGCCTCTACTTCGTGGAGGAGGGACAGCGAAAGACTCCTAGCCAGGAGGGCCTGCCCCTGGAGCATGTG GCTGGGGACCGGTGCATCCACGAGGACCTGCTAGGGCTGACCTTCCGGATCTCTCCACACGCCTTCTTCCAGGTG AACACACCCGCAGCCGAGGTGCTCTACACAGTCATCCAGGACTGGGCCCAATTGGATGCGGGGAGCATGGTGCTG GACGTGTGCTGTGGCACCGGCACCATTGGCCTGGCCCTGGCCCGGAAGGTAAAGAGGGTCATTGGGGTCGAGCTA TGCCCAGAGGCTGTGGAGGACGCCCGGGTGAACGCCCAGGACAATGAGTTGAGTAATGTGGAGTTCCACTGCGGG CGTGCTGGCTTGCATTCCAAGGTGATCCTGGCCATCCGGAGAGCTAAGAACCTCAGGCGGCTGCTGTACGTCTCA TGCAACCCCGGGCAGCCATGGGCAACTTTGTGGACGCCCCCTTTTCCCCCCACAGCCTCTGCAGAGCCCCATC TAACCGGGTGAAGGGCATTCCCTTCCGGCCGGTCAAGGCTGTGGCAGTGGACCTGTTCCCGCAGACCCCGCACTG TGAGATGCTCATCCTGTTTGAGAGGGTGGAGCACCCCAATGGCACAGGGGTCTTGGGGCCCCACAGCCCTCCAGC TCAACCCACACCAGGACCCCCAGATAACACCCTACAAGAAACTGGGACCTTCCCCTCATCCTAGGCCCAGGACCC AGAGGTAGGCAGCCAAAGGGCACAGAACCCTGTGCCCCACCAGGATTGGCCTGCTGCTAGGGGCCAGGGGCCCTG ACCAGGAAGACAGGTGGGTTCCTGTAGCCTGTTGCCCCATCCCCAGGGCCTTTGTGGACTAGCCAAGGCTGTGAGG GCCAGAATAAACAACTGCTCAAC

MSENLDNEGPKPMESCGQESSSALSCPTVSVPPAAPAALEEVEKEGAGAATGPGPQPGLYSYIRDDLFTSEIFKL
ELQNVPRHASFSDVRRFLGRFGLQPHKTKLFGQPPCAFVTFRSAAERDKALRVLHGALWKGRPLSVRLARPKADP
MARRRRQEGESEPPVTRVADVVTPLWTVPYAEQLERKQLECEQVLQKLAKEIGSTNRALLPWLLEQRHKHNKACC
PLEGVRPSPQQTEYRNKCEFLVGVGVDGEDNTVGCRLGKYKGGTCAVAAPFDTVHIPEATKQVVKAFQEFIRSTP
YSAYDPETYTGHWKQLTVRTSRRHQAMAIAYFHPQKLSPEELAELKTSLAQHFTAGPGRASGVTCLYFVEEGQRK
TPSQEGLPLEHVAGDRCIHEDLLGLTFRISPHAFFQVNTPAAEVLYTVIQDWAQLDAGSMVLDVCCGTGTIGLAL
ARKVKRVIGVELCPEAVEDARVNAQDNELSNVEFHCGRAEDLVPTLVGRLASQHLVAILDPPRAGLHSKVILAIR
RAKNLRRLLYVSCNPRAAMGNFVDAPLFPPQPLQSPI

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6462/6881 FIGURE 5965

CGTGAGTGCCGCTGACAGAAGTCAAGAGAATCGGCTGGGACGGGGTTGGGGCGACAACGGGCCGGGGGGGACCCG GACTTAACTCCCGCCTCTTTCCCAGATCCCGCCGTCACTGCTCCGCCGCCGCCGCTGCACACGGGACACGCGCGA CTGCCAGCGGCTGGACCCCAGCGGCCAGGGCCTGTGGGACCCGGCATCCGAGTACATCTACTTCTGCTCCAAACA CTTTGAGGAGGACTGCTTTGAGCTGGTGGGAATCAGTGGATATCACAGGCTAAAGGAGGGGGGCAGTCCCCACCAT ATTTGAGTCTTTCTCCAAGTTGCGCCGGACAACCAAGACCAAAGGACACAGTTACCCACCTGGCCCCCTGAAGT ${\tt CAGCCGGCTCAGACGATGCAGGAAGCGCTGCTCCGAGGGCCCGAGGGCCCACAACTCCATTTTCTCCACCTCCACC}$ TGCTGATGTCACCTGCTTTCCTGTGGAAGAGGCCTCAGCACCTGCCACTTTGCCGGCCTCCCCAGCTGGGAGGCT GGAGCCTGGCCTTAGCAGCCCCTTTTCAGACCTACTGGGCCCCTTGGGTGCCCAGGCAGATGAAGCAGGCTGCAG CGCCCAGCCTTCACCAGAGCGCCAGCCCTCCCCTCTCGAACCACGGCCAGTCTCCCCCTCAGCGTATATGCTGCG CCTGCCCCCACCCGCGGAGCCTACATCCAGAATGAACACAGCTACCAGGTGGGCAGCGCCTTACTCTGGAAGCG GCGAGCCGAGCCCTTGATGCCCTTGACAAGGCCCAGCGCAGCTGCAGGCCTGCAAGCGGCGGGAGCAGCG GCTGCGGTTGAGACTGACCAAGCTGCAGCAGGAGCGGGCACGGGAGAAGCGGGCACAGGCAGATGCCCGCCAGAC ${\tt TCTGAAGGAGCATGTGCAGGACTTTGCCATGCAGCTGAGCAGCAGCATGGCC\underline{TGA}{\tt GGGGCTGCTGGACTGACCGA}}$ GGGGCTGCCCAGCAAGACTGCAGCCTCTTCCTCCCTCAGATCCCACCAGACCCACCAGGTGCCATAATAAAGCGG

MPRHCSAAGCCTRDTRETRNRGISFHRLPKKDNPRRGLWLANCQRLDPSGQGLWDPASEYIYFCSKHFEEDCFEL VGISGYHRLKEGAVPTIFESFSKLRRTTKTKGHSYPPGPPEVSRLRRCRKRCSEGRGPTTPFSPPPPADVTCFPV EEASAPATLPASPAGRLEPGLSSPFSDLLGPLGAQADEAGCSAQPSPERQPSPLEPRPVSPSAYMLRLPPPAGAY IQNEHSYQVGSALLWKRRAEAALDALDKAQRQLQACKRREQRLRLRLTKLQQERAREKRAQADARQTLKEHVQDF AMQLSSSMA

CGGGAAGATGCCGGGCCGGCCGACTTGAGATCCGCGGGTCTCCTGCTCCTTTTCCGTCTGCGTCGGGAGCTCCC GGGCACGTGAGGCCGTGCCGCGTTTACTGGCGGGAGGGACGGCCTAGCCGGGCGACGCCTCGGAGGAGGCCGCGG AGTCTCCTCCTGCACCCGACGGAGGAGCCCCATCAACGTGGAGGGCCTGCTGCCATCAAAAATAAGGATTAATT TAGAAGATAATGTACAATATGTGTCCATGAGAAATCTGCTCCCGGGGGTATTCTTGACTTAAACAAGGTTGCAAC GAAACTGGGAGTCCGAAAGCGGAGAGTGTATGACATCACCGATGTCTTAGATGGAATCGACCTCGTTGAAAAGAA ATCCAAGAACCATATTAGATGGATAGGATCTGATCTTAGCAATTTTGGAGCAGTTCCCCAACAAAAGAAGCTACA TGAGTTAACAGATGACAAAGAAAATGAAAGACTAGCATATGTGACCTATCAAGACATTCATGCATTCAGGCCTT CCATGAACAGATCGTCATTGCAGTTAAAGCTCCAGCAGAAACCAGATTGGATGTTCCAGCTCCCAGAGAAGACTC TATCACAGTGCACATAAGGAGCACCAACGGACCTATCGATGTCTATTTGTGAGAAGTGGAGCAGGGTCAGACCAG TAACAAAAGGTCTGAAGGTGTCAGGACCTCTTCATCTGAGAGCACTCATCCAGAAGGCCCTGAGGAAGAAAAA TCCTCAGCAAAGTGAAGAATTGCTTGAAGTAAGCAACTGATGGCATTTGAGAATTTATGTATCACTGAGTTTTTT GGGAATATCTTCCTGGAGAATTACGCATCAAATTTGATTCTCAGAGCAATAAATTATCCATGAAGTGCTCTCGTT CTCAGTAGCGGCATCATGGCCAGTAGTGTCTTTGAGGAGTTCACCACTTAGATTACTGAGTAATTGTGGTTTCCA CATTTGAAAACAACTCCTTTTATAATTATTCACTGCTTTTTTGTCAGTGAAATAGACATCTTGCCTCCTGAAGTAG CTTCATCACAGAGTGTCATGAAGACAGACAGTCAGGCTGAAAAGGACAGTTCTTTGTGGACTCTACCCTTCCCTT CAAGGAGTATGTCATATGTCACAAAAGAAATTGCCTTACACTGGTTCATGTTTGCAGTTACTGTTGTACATTGCA TTTGGTATCTATAACTTATTAGAATCCTCTGGATGAGGGTTAGAAGAGACTTTTTCCAAACTTCTACATGTAGAA TGGAGTCAGATACTTCTTGGTTTTAAGCTGTCTACCTAATTGCTGTCTCCCAGCAGATCGGTGGCCAGGTG GCTTTGGGGGCAAGGATAGAAATGTCATCAGGAAATAGCTGAATTCATTGTGAAACATGAATTCAGTCATGGTGA TAATTGGAAACTCCTTTCAGGTTTTTTGCAAGTAGATTTTGTAATGTTTGTGTATGCAGCCTTGCTGTTGAGTCAG TCCAAGGGGTTTTACTTAGGACAAGTTGTACCTTGCCCTCTCCAGCTCTGCTCCCACATTTTCACATACCTAG CTATTTCTACCTCATTGGGTAAGTCATTTACCACTCTGTGCCTCAGTTTACTCTGTAGTTTACCATTAGACTGTG AGCTCCTTGAGGGACTTTGTCATAATCACTGTTACATCCCAGTGCCTCACACCATGCCTGGCCCTTAAGAAGTGC

GGGCACGTGAGGCCGTGCCGCGTTTACTGGCGGGAGGGACGGCCTAGCCGGGCGACGCCTCGGAGGAGGCCGCGG AGTCTCCTCCTGCACCGGAGGAGACCCCATCAACGTGGAGGGCCTGCTGCCATCAAAAATAAGGATTAATT TAGAAGATAATGTACAATATGTGTCCATGAGAAATCTGCTCCCGGGGGTATTCTTGACTTAAACAAGGTTGCAAC GAAACTGGGAGTCCGAAAGCGGAGAGTGTATGACATCACCGATGTCTTAGATGGAATCGACCTCGTTGAAAAGAA ATCCAAGAACCATATTAGATGGATAGGATCTGATCTTAGCAATTTTGGAGCAGTTCCCCAACAAAAGAAGCTACA TGAGTTAACAGATGACAAAGAAATGAAAGACTAGCATATGTGACCTATCAAGACATTCATAGCATTCAGGCCTT CCATGAACAGATCGTCATTGCAGTTAAAGCTCCAGCAGAAACCAGATTGGATGTTCCAGCTCCCAGAGAAGACTC TATCACAGTGCACATAAGGAGCACCAACGGACCTATCGATGTCTATTTGTGAGAAGTGGAGCAGGGTCAGACCAG TAACAAAAGGTCTGAAGGTGTCAGGACCTCTTCATCTGAGAGGCACTCATCCAGAAGGCCCTGAGGAAGAAGAAAAA TCCTCAGCAAAGTGAAGAATTGCTTGAAGTAAGCAACTGATGGCATTTGAGAATTTATGTATCACTGAGTTTTTT GGGAATATCTTCCTGGAGAATTACGCATCAAATTTGATTCTCAGAGCAATAAATTATCCATGAAGTGCTCTCGTT $\tt CTCAGTAGCGGCATCATGGCCAGTAGTGTCTTTGAGGAGTTCACCACTTAGATTACTGAGTAATTGTGGTTTCCA$ CATTTGAAAACAACTCCTTTTATAATTATTCACTGCTTTTTTGTCAGTGAAATAGACATCTTGCCTCCTGAAGTAG CTTCATCACAGAGTGTCATGAAGACAGACAGTCAGGCTGAAAAGGACAGTTCTTTGTGGACTCTACCCTTCCCTT CAAGGAGTATGTCATATGTCACAAAAGAAATTGCCTTACACTGGTTCATGTTTGCAGTTACTGTTGTACATTGCA TTTGGTATCTATAACTTATTAGAATCCTCTGGATGAGGGTTAGAAGAGACTTTTTCCAAACTTCTACATGTAGAA TGGAGTCAGATACTTCTTGGTTTTAAGCTGTCTACCTAATTGCTGTCTCCCAGCAGATCGGTGGCATGCCCAGTG GCTTTGGGGGCAAGGATAGAAATGTCATCAGGAAATAGCTGAATTCATTGTGAAACATGAATTCAGTCATGGTGA TAATTGGAAACTCCTTTCAGGTTTTTGCAAGTAGATTTTGTAATGTTTGTGTATGCAGCCTTGCTGTTGAGTCAG TCCAAGGGGTTTTACTTAGGACAAGTTGTACCTTGCCCTCTCCCAGCTCTGCCCCCACATTTTCACATACCTAG CTATTTCTACCTCATTGGGTAAGTCATTTACCACTCTGTGCCTCAGTTTACTCTGTAGTTTACCATTAGACTGTG AGCTCCCTGAGGGACTTTGTCATAATCACTGTTACATCCCAGTGCCTCACACCATGCCTGGCCCTTAAGAAGTGC TCAATAAATGTCTGAACAAAAAAAAAAAAAAAAAAAAA

PCT/US2003/028547

6466/6881 FIGURE 5969A

CAAGAACGTCCTAGCCGCCAGCAGCATCTATTTCAAGTCCCTGGTCCTGCACGACAACCTCATCAACCTGGACAC AGACATGGTCAGCTCCACAGTGTTCCAGCAGATCTTGGACTTCATCTACACAGGCAAGCTGCTGCCCAGCGACCA GCCAGCCGAGCCCAACTTCAGCACCCTCCTCACTGCCGCCAGCTACCTCCAGCTGCCCGAGTTGGCAGCCCTCTG CCGCCGCAAACTCAAGCGAGCCGGCAAGCCCTTTGGCTCTGGGAGGGCGGGGTCCACTGGCATGGGGCGGCCCCC CCGCAGCCAGCGGCTGTCCACGGCCTCTGTCATCCAAGCTCGGTATCAGGGGGCTCGTGGATGGGCGCAAGGGGGC CGTGCAAGGTCTGGGCCGGGCTGTCTGCCCAGCTGGCGGGGAGGCGGGTCTGGGGGGGCTGCAGCAGCACCAA $\tt CCCAGGTCCCCACCTCACTCCCGATGACGCAGCCCAGCTGAGCGACAGCCAACATGGCTCGCCCCCTGCGGCCTC$ TGCTCCTCCCGTTGCCAACAGTGCCTCTTATTCTGAGCTGGGGGGCACCCCTGATGAGCCCATGGATCTGGAGGG GGCCGAGGACAACCACCTGAGCCTGCTGGAGGCGCCTGGTGGGCAGCCTCGGAAGAGCCTCCGGCACTCCACTCG GAAGAAGGAGTGGGGCAAGAAGGAGCCTGTGGCTGGCTCCCCCTTTGAGCGGAGAAGCAGGGCCCAAGGGTCC CTGCCCGGGAGAGGGGGGAGGGGTCGGGGACAGGGTTCCCAATGGCATCCTGGCTAGTGGGGCTGGCCCTAG CGGGCCCTATGGGGAGCCCCCCTACCCCTGCAAGGAGGAGGAGGAGGAACGGCAAGGATGCAAGTGAAGACAGTGC GCAGAGCGGGAGCGAGGGGGCAGCGGCCATGCCAGCGCCCACTACATGTACCGGCAGGAGGGCTACGAGACGGT GTCCTACGGGGACAACTTGTATGTGTGCATTCCCTGCGCCAAGGGCTTCCCCAGCTCTGAGCAGCTCAATGCGCA CGTGGAGACTCACACGGAGGAAGAGCTGTTCATCAAGGAAGAGGGGGCCTACGAGACAGGCAGTGGGGGTGCCGA GGAGGAGGCCGAGGACCTGTCAGCACCCAGTGCGGCCTACACGGCTGAGCCCCGGCCCTTCAAGTGTTCGGTCTG CGAGAAGACCTACAAGGACCCAGCCACGCTGCGGCAGCACGAGAAGACGCACTGGCTGACACGGCCCTTCCCCTG CAACATCTGTGGCAAAATGTTCACGCAGCGCGCACCATGACGCGTCACATGCGGAGCCACCTGGGCCTGAAGCC CTTCGCCTGCGATGAGTGTGGCATGCGCTTCACCCGTCAGTACCGCCTCACGGAGCACATGCGTGTGCACTCGGG CGAGAAACCTTACGAGTGCCAGCTGTGCGGGGGCAAGTTCACCCAGCAGCGCAACCTCATCAGCCACCTGCGCAT GCACACCTCCCCCCCTAGAAGCCCAAAGACCCGCGGGCGCCCCTCTGCCACCTTGCTCCCCGGGAACCCATGGAAG GAGAAGCGAGGTGATGCAGCAGCAGGGGCAAGACCCTGGGTCCAGTGGAGGCTCCGGGTGGCCCCTCTGGCCCCC TGGGTCTCGCTGGGACCTGGTCCCTTTGTTGCAGGCGGCTTGGAGAAAGGGCAGTGGGACGCTGGCCACGGCCAG TCACTGGCGCTGGGACAGTCAGGGTGACCCCACCGCCTACCTCTACATCTAAAGAGCCCTCTGGGCCTGTGTT GCTGTTATTCCTACTGATCTGTTCCTCTGTTTTTCTTTTTGATTTTTTTAAACCAAAACAGACAATAGCT TATTTTCTTTCCGCCCCCCCCGGGGCTGAGCCTGGGTCTGAAGACTGAATGTAACAGGGGCCGCTGGCACTCCTG CGCGTCCCCGGCTCTGGCGCTGCAGGGGTGTCGGCGCGCCCACCTCTCCAGGCCCCAGAAGCCCTTCTTGCCCAA AGGCTTCCCTGGTCCCTGAGCCCTGCCTCGGCTGCCTCAGGGGAGAGTGCTTTTCCTGTAGTTTCCAAGGAATAT TCTTTGTTTAGAGGTACTTGTTTTTTATTAAGAGAAAAACCAGTGTAACGTTTATGTGACTGTTTGAACTGGAAG GTCTGGGGTTCCGGGGGGGGGGGGGGGGCTAGACTCAATGCCGGGGCCGTCGGTACTCTTGTTTTCATTTGTGTG TTCGCTTTCCCTCCTCCTCGCTGAACAAGGTGGAGACTTCTGACCTTTTGCTACCTCTTGAATTCATGACAACG ATATGTTGGTGACTGGCAGTGGAAGCCCTTGACACTCTTGTTTTCCTTCGCTTAGCACCTAGGAAGTCGTGTGCA GGAGCCAGCAGGGCCCAAGTGGCCCAGTGCCTGCAGCTCACCTGTGGGTTTTCCCTTTGAGCCTTTGGCCACAT CCACCTCGAGGGGACCCTGGCACCCCGGGCACACAAACCTCTGTGGTATAGGTGAGGGGTGTGAGGCCCCAGCCT GGAGCCAGGCACTGGGTGCTGACAGGGGAACCATGAGGAGGGTGGCAGGTCTTTGCAGCTCCCGGCCAGGGTGAG GCGGAAGTGAGCCCTCATCCTGCCACTCCTATCCTCCATTCCTGCAAGAGTTTTAAGCTTGAGAGAGCTGACCAC AGGGCCCCCGGGGAACAGGGATGGCACTTCCCTGAGCAGTCCTGGCCCCCGGCCACTGTCTCGGGGCCCACCTC TCGCCCCTCATCTTGGTAATTAGCCAGCCTCAGATACTTCTGTGGGCCCTGAAGTGGGCTCTCAAGGTCAGACCA AGGTTGCTGATCTCAGTCCCACTGTCTTCAGCCAGCTGAAGCTGTGGGGCTGGGCTGGCAGCCTTTATTGTCATC TTGCTTCACCATTTTTTTTTCTCTCTCTTTTCATTCTATTTTAAGTTTAGACCAAAAAAATACAGAGTCATCCCC TACCCCCACCCTCTAGAGACCCTCCAGCTAAAAACAGAGCCTGAGTTCAGGGACCCAAGTGGTGAGCGGCGTCT

6467/6881 FIGURE 5969B

GGGGGAGGAGACCCATGGACTTCACCCATACTCAGTGAGGGGGCTCCTGCCGTCCTGACGCCACCCCGCCCCATC AGCACTTAAGCCACATGACACAAAGTCTGTACCGCACGGGAAATGTTCACGCGCCTGGCCGTGTGCATGGCCTCC CGGGCTGTGGGCAGCCGCATCTGTGAGGTGACTCGTGAAAGTAGGTGATTCCTTTGCAGAACTTCAGGGACTGGG AGCAGAGGCCCCTCACTCAACGACGTTTGTGCGACATAGTATTGTATCCACCTTAGTATTGTATCGAGCCTTTTC TTAAGAGCCTCACAAGGAAACTGGGTTATTGGAGGCCAAGGCGGCTTACAGTTCTCTGCGTTCGTCACTTAATTC GAAAAAAAAATAAGCTCATACCCAAATTCACAAAGCCTATTTTTTAAACCAAAGCACATTTTGAATGAGTATGGA ACCTCCATGGGCTCAGAAAAAAGATGCTAATATATTTATCTCATTGTTTACATAAGCTTTTACAGTTTCAGACCT CAGCAGCTGTAAGGCCAGTCCAGGGAACCCTCCCCTGCTGCTGGAAACCCTTCTGAGTTGGCCCTGGAGTGGCTC ACGGGCAGAGAAGGGTAGCCCTGGGGGCTGGGGGAGGGATTGGAAGCCTCCCTGGAGTCACCTGAGCCCTCGTCCC CATTCCCAGGGCCCCTCCAAGCCCAGCTGGCACCAAAGAGCTTGGGCCCGTGCTGACCAGCCCCCAAGGCCCTCT GGCCGGACCATGCTGGTCCTGACCAGCTAGCCTACGCGGGGATGGCCGTCAGTTCTGGCCACAGGACCCGAGTCT GGGCTTGGGTCCCCCTGCTCTCCCCGTGACCCTTGGGGATGGGTTGATGCGAGGGTCCCACTCAAGCCAAAA AGCCGGGACCTTTGCGCAGCTCTGTCGACTCTGGTGGGTCCCCACTCCTGGGGCCCCCTAACCCCACCCCAGGCA GCGGAAGGGGCTGACTGGTCTTGCCAACATAGACGGTGCAAACACTCTTAACAGTGTTGTTTTTGTAT CAATATGTTTGTGCAGTGATGAATGTATTTATTTCTCAGACTTGGGGCGAGTGAGCGGGTGGCAGGCCGGGCTCC GATGAACCTTTAAGCAAATAAGAATCTCAGAGACTCGCAGCATAGCCATACACCTCAGCCTGTGAAATGAACGAT CCGGACCCTCACCAACTTTCCCCACCTCAGGCAGCCCTGTGTGTTTACCGTTCATCACCACTCGGGGGCACCGGG CCGCCCACCCACTCCCAAAATCCGTCAGTATTCACTGGACCTCAGGCCCTGTGCAGGAGTGCGATCCGGGCTGGG CCGCTGGGCAGGCTGACCCCCTGCCCTCCTGCGGCCATCCTGAGTTGGGGTGAGGCCTGGGCAGCCGGAGGGCAG GGCTCAGGGAGCAGGAGGCTGCATCCGTCCACCCCAGGCGTGGGGGACAAAAGCCAAAGGTGCCAGGCCTTAGA GCAGACAAGGGCTCTCAGCCCTGGCATGCCCCCTAAAGGGACCAAGGTCCTCCTATTTCCCAGAACCCCGTTGGG ACATTCCACGCCGGGGTGGGGTGGGCATGAGCGGTGGGAACTGAGGCTGCCCAGGACCCCCTTCCTAGGATGCC ATTTATTGACCTCAAAAATGCTGCATAACAGACCTCACTGGGGCAGGGAGGATCCCCAGGGCTCCCACCCTCCAC GGGTTATAGCTGTTTTGTTTAATTGGAACTGGAAGAGGGATCATGTTTTGTTTTATGCCCTTCCCAGAAGGGGGG AGGGACACCGGGATCGCACTCCTGTACTGGCCACCGCCGCTGTCACTTGTCACATTGAGTTCATGTCCCTTGAGA GTTTGTATAAATTCAGGTCAGAGCTGCAGCTACACAGCTGCCCAGTGTCATAGAAAAGCAATTCACCAACGACTG ATCTCTCCATTCAGAAGTGTGCAGTCTTAAATGTACAGCGATAAGAAACTGTTATTTTATGATCTTTTCATTAAA AGCTTGATTG

MVSGPLALRWCAWAGRGDMGPDMELPSHSKQLLLQLNQQRTKGFLCDVIIMVENSIFRAHKNVLAASSIYFKSLV
LHDNLINLDTDMVSSTVFQQILDFIYTGKLLPSDQPAEPNFSTLLTAASYLQLPELAALCRRKLKRAGKPFGSGR
AGSTGMGRPPRSQRLSTASVIQARYQGLVDGRKGAHAPQELPQAKGSDDELFLGGSNQDSVQGLGRAVCPAGGEA
GLGGCSSSTNGSSGGCEQELGLDLSKKSPPLPPATPGPHLTPDDAAQLSDSQHGSPPAASAPPVANSASYSELGG
TPDEPMDLEGAEDNHLSLLEAPGGQPRKSLRHSTRKKEWGKKEPVAGSPFERREAGPKGPCPGEEGEGVGDRVPN
GILASGAGPSGPYGEPPYPCKEEEENGKDASEDSAQSGSEGGSGHASAHYMYRQEGYETVSYGDNLYVCIPCAKG
FPSSEQLNAHVETHTEEELFIKEEGAYETGSGGAEEEAEDLSAPSAAYTAEPRPFKCSVCEKTYKDPATLRQHEK
THWLTRPFPCNICGKMFTQRGTMTRHMRSHLGLKPFACDECGMRFTRQYRLTEHMRVHSGEKPYECQLCGGKFTQ
ORNLISHLRMHTSPS

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6469/6881 FIGURE 5971

GTGGTCACCGCGGACGACTTTGGTTACTGCCCGCGACGCGATGAGGGTATCGTGGAGGCCTTTCTGGCCGGGGCT GTGACCAGCGTGTCCCTGCTGGTCAACGGTGCGGCCACGGAGAGCGCGGGGGAGCTGGCCCGCAGGCACAGCATC CCCACGGGCCTCCACGCCAACCTGTCCGAGGGCCGCCCGTGGGTCCGGCCCGCGTGGCGCCTCATCGCTGCTC ${\tt GGCCCGGAAGGCTTCTTCCTTGGCAAGATGGGATTCCGGGAGGCGGTGGCGGCCGGAGACGTGGATTTGCCTCAG}$ GTGCGGAGCCGCAGCTACAGGAGGATGCTCGCGAGGACCCCCAGAGCTCCGCCCGGAGGGTACTGTGAGGCCGTT AGGAGCTGGCGGTGGATGACTTCCGCATTCAAACACTGGAGCCATCACACGGAAGCACGAGGAGGGTATCCTCGG CAGCTACTCCCGGTCGCTCAAGGTGTCTCTCGCTCGCCCCTCTAGGTGCGGAAGGAGCTCGAGGCCCAACTAAGCT AGACGCCTTCGTGGGCCTGAGCACTTGCGGCCGGCACATGTCCGCTCACCGCGTGTCCGGGGCCCTGGCGCGGGT $\verb|CCTGGAAGGTACCCTAGCGGGCCACACCCTGACAGCCGAGCTGATGGCGCACCCCGGCTACCCCAGTGTGCCTCC| \\$ $\tt CACCGGCGGCTGCGGTGAAGGCCCCGACGCTTTCTCTTGCTCTTGGGAGCGGCTGCATGAGCTGCGCGTCCTCAC$ CGCGCCCACGCTGCGGGCCCAGCTTGCCCAGGATGGCGTGCAGCTTTGCGCCCTCGACGACCTGGACTCCAAGAG CAACCAAGCACTAATCCCCTTAGTACCAAGAAAGGGGAGCCAGGATTTAGTCCTGGCCCAGCCCAGAGCTGGGAC CTGGAGCACGATCTGTTGACTTCCCTGGGTAGGACACTGCCACCTCTGGGCTCAGGTCCTCATGCCTCCAAATGG ${\tt CATCTAGAGTTTGAGCAGCCTTCTTGGCTGCAGGCAGGCCTAGCCTGTGGCAGCGGGCTAGGGCCCGCAGAGCAT}$ TTGGTGCCCCTCCATGTTGCAATGCAAACACCTTCACCACTGGGGCAGTGGGGAGAGATGGCTATATTAATAAAA TAACGTGTGTCTTTC

MSRPRMRLVVTADDFGYCPRRDEGIVEAFLAGAVTSVSLLVNGAATESAAELARRHSIPTGLHANLSEGRPVGPA RRGASSLLGPEGFFLGKMGFREAVAAGDVDLPQVREELEAQLSCFRELLGRAPTHADGHQHVHVLPGVCQVFAEA LQAYGVRFTRLPLERGVGGCTWLEAPARAFACAVERDARAAVGPFSRHGLRWTDAFVGLSTCGRHMSAHRVSGAL ARVLEGTLAGHTLTAELMAHPGYPSVPPTGGCGEGPDAFSCSWERLHELRVLTAPTLRAQLAQDGVQLCALDDLD SKRPGEEVPCEPTLEPFLEPSLL

FIGURE 5973

 $\label{thm:mwsagr} MWSAGRGGAAWPVLLGLLLALLVPGGGAAKTGAELVTCGSVLKLLNTHHRVRLHSHDIKYGSGSGQQSVTGVEAS\\ DDANSYWRIRGGSEGGCPCGSPVRCGQAVRLTHVLTGKNLHTHHFPSPLSNNQEVSAFGEDGEGDDLDLWTVRCS\\ GQHWEREAAVRLQHVGTSVFLSVTGEQYGSPIRGQHEVHGMPSANTHNTWKAMEGIFIKPSVEPSAGHDEL$

GCTTCAGGGTACAGCTCCCCGGCAGCCAGAAGCCGGGCCTGCAGCGCCTCAGCACCGCTCCGGGACACCCCACCC GCTTCCCAGGCGTGACCTGTCAACAGCAACTTCGCGGTGTGGTGAACTCTCTGAGGAAAAACCATTTTGATTATT ACTCTCAGACGTGCGTGGCAACAAGTGACTGAGACCTAGAAATCCAAGCGTTGGAGGTCCTGAGGCCAGCCTAAG ${\tt TCGCTTCAAA} \underline{{\tt ATG}} {\tt GAACGAAGGCGTTTGTGGGGGTTCCATTCAGAGCCGATACATCAGCATGAGTGTGTGGACAAG}$ $\tt CCCACGGAGACTTGTGGAGCTGGCAGGGCAGAGCCTGCTGAAGGATGAGGCCCTGGCCATTGCCGCCCTGGAGTT$ GCTGCCCAGGGAGCTCTTCCCGCCACTCTTCATGGCAGCCTTTGACGGGAGACACAGCCAGACCCTGAAGGCAAT GGTGCAGGCCTGGCCCTCACCTGCCTCCCTCTGGGAGTGCTGATGAAGGGACAACATCTTCACCTGGAGACCTT CAAAGCTGTGCTTGATGGACTTGATGTGCTCCTTGCCCAGGAGGTTCGCCCCAGGAGGTGGAAACTTCAAGTGCT GGATTTACGGAAGAACTCTCATCAGGACTTCTGGACTGTATGGTCTGGAAACAGGGCCAGTCTGTACTCATTTCC AGAGCCAGAAGCAGCTCAGCCCATGACAAAGAAGCGAAAAGTAGATGGTTTGAGCACAGAGGCAGAGCCCCTT GAAAGTGAAGCGAAAGAAAATGTACTACGCCTGTGCTGTAAGAAGCTGAAGATTTTTGCAATGCCCATGCAGGA TATCAAGATGATCCTGAAAATGGTGCAGCTGGACTCTATTGAAGATTTGGAAGTGACTTGTACCTGGAAGCTACC CACCTTGGCGAAATTTTCTCCTTACCTGGGCCAGATGATTAATCTGCGTAGACTCCTCCTCCCACATCCATGC ATCTTCCTACATTTCCCCGGAGAAGGAAGAGCAGTATATCGCCCAGTTCACCTCTCAGTTCCTCAGTCTGCAGTG CCTGCAGGCTCTCTATGTGGACTCTTTATTTTTCCTTAGAGGCCGCCTGGATCAGTTGCTCAGGCACGTGATGAA CCCCTTGGAAACCCTCTCAATAACTAACTGCCGGCTTTCGGAAGGGGATGTGATGCATCTGTCCCAGAGTCCCAG CGTCAGTCAGCTAAGTGTCCTGAGTCTAAGTGGGGTCATGCTGACCGATGTAAGTCCCGAGCCCCTCCAAGCTCT GCTGGAGAGAGCCTCTGCCACCCTCCAGGACCTGGTCTTTGATGAGTGTGGGATCACGGATGATCAGCTCCTTGC CCTCCTGCCTTCCCTGAGCCACTGCTCCCAGCTTACAACCTTAAGCTTCTACGGGAATTCCATCTCCATATCTGC CTTGCAGAGTCTCCTGCAGCACCTCATCGGGCTGAGCAATCTGACCCACGTGCTGTATCCTGTCCCCCTGGAGAG TTATGAGGACATCCATGGTACCCTCCACCTGGAGAGGCTTGCCTATCTGCATGCCAGGCTCAGGGAGTTGCTGTG TGAGTTGGGGCGGCCCAGCATGGTCTGGCTTAGTGCCAACCCCTGTCCTCACTGTGGGGGACAGAACCTTCTATGA $\tt CCCGGAGCCCATCCTGTGCCCCTGTTTCATGCCTAAC\underline{TAG}CTGGGTGCACATATCAAATGCTTCATTCTGCATAC$ TTGGACACTAAAGCCAGGATGTGCATGCATCTTGAAGCAACAAAGCAGCCACAGTTTCAGACAAATGTTCAGTGT GATAGGCAGATGTTGACTTGAGGAGTTAATGTGATCTTTGGGGAGATACATCTTATAGAGTTAGAAATAGAATCT GAATTTCTAAAGGGAGATTCTGGCTTGGGAAGTACATGTAGGAGTTAATCCCTGTGTAGACTGTTGTAAAGAAAC

MERRLWGSIQSRYISMSVWTSPRRLVELAGQSLLKDEALAIAALELLPRELFPPLFMAAFDGRHSQTLKAMVQA WPFTCLPLGVLMKGQHLHLETFKAVLDGLDVLLAQEVRPRRWKLQVLDLRKNSHQDFWTVWSGNRASLYSFPEPE AAQPMTKKRKVDGLSTEAEQPFIPVEVLVDLFLKEGACDELFSYLIEKVKRKKNVLRLCCKKLKIFAMPMQDIKM ILKMVQLDSIEDLEVTCTWKLPTLAKFSPYLGQMINLRRLLLSHIHASSYISPEKEEQYIAQFTSQFLSLQCLQA LYVDSLFFLRGRLDQLLRHVMNPLETLSITNCRLSEGDVMHLSQSPSVSQLSVLSLSGVMLTDVSPEPLQALLER ASATLQDLVFDECGITDDQLLALLPSLSHCSQLTTLSFYGNSISISALQSLLQHLIGLSNLTHVLYPVPLESYED IHGTLHLERLAYLHARLRELLCELGRPSMVWLSANPCPHCGDRTFYDPEPILCPCFMPN

WO 2004/030615 PCT/US2003/028547

6475/6881 FIGURE 5977

AACGCCAGCGCCTGCGCACTGAGGGCGGCCTGGTCGTCGTCGTCGCGGCGGCGGCGGCGGCTGAGGAGCCCGGCTGA GGCGCCAGTACCCGGCCCGGTCCGCATTTCGCCTTCCGGCTTCGGTTTCCCTCGGCCCAGCACGCCCCCGGCCCCG AGCAAGACCTTCGGGCAGAAGCCCGTGAAGTTCCAGCTGGAGGACGACGGCGAGTTCTACATGATCGGCTCCGAG GTGGGAAACTACCTCCGTATGTTCCGAGGTTCTCTGTACAAGAGATACCCCTCACTCTGGAGGCGACTAGCCACT GTGGAAGAGGAGGAAGAAAATAGTTGCATCGTCACATGATCACGGATACACGACTCTAGCCACCAGTGTGACCCTG CTTTGGTGTGGATGCATCGCTGCACTCACCCTCCGTGCTGATTCCGCCTTAGTTCTCCACTTTGATGACCATGAC CCAGCTGTGATCCATGAGAACGCATCTCAGCCCGAGGTGCTGGTCCCCATCCGGCTGGACATGGAGATCGATGGG CAGAAGCTGCGAGACGCCTTCACCTGGAACATGAATGAGAAGTTGATGACGCCTGAGATGTTTTCAGAAATCCTC TACCCCACGGACAGCATCCTGGAGGACCAGTCAGACCAGCGCGTCATCATCAAGCTGAACATCCATGTGGGAAAC ATTTCCCTGGTGGACCAGTTTGAGTGGGACATGTCAGAGAAGGAGGAACTCACCAGAGAAGTTTGCCCTGAAGCTG TGCTCGGAGCTGGGGTTGGGCGGGAGTTTGTCACCACCATCGCATACAGCATCCGGGGACAGCTGAGCTGGCAT CAGAAGACCTACGCCTTCAGCGAGAACCCTCTGCCCACAGTGGAGATTGCCATCCGGAACACGGGCGATGCGGAC CAGTGGTGCCCACTGCTGGAGACTCTGACAGACGCTGAGATGGAGAAGAAGATCCGCGACCAGGACAGGAACACG $AGGCGGATGAGGCGTCTTGCCAACACGGCCCCGGCCTGG{{\color{blue} TAA}}CCAGCCCATCAGCACACGGCTCCCACGGAGCAT$ CTCAGAAGATTGGGCCGCCTCTCCTCCATCTTCTGGCAAGGACAGAGGCGAGGGGACAGCCCAGCGCCATCCTGA GGATCGGGTGGGGGTGGAGTGGGGGCTTCCAGGTGGCCCTTCCCGGCACACATTCCATTTGTTGAGCCCCAGTCC TGCCCCCACCCCACCTCCCTACCCCTCCCCAGTCTCTGGGGTCAGGAAGAAACCTTATTTTAGGTTGTGTTTT C

MMMMALSKTFGQKPVKFQLEDDGEFYMIGSEVGNYLRMFRGSLYKRYPSLWRRLATVEERKKIVASSHDHGYTTL
ATSVTLLKASEVEEILDGNDEKYKAVSISTEPPTYLREQKAKRNSQWVPTLPNSSHHLDAVPCSTTINRNRMGRD
KKRTFPLWCGCIAALTLRADSALVLHFDDHDPAVIHENASQPEVLVPIRLDMEIDGQKLRDAFTWNMNEKLMTPE
MFSEILCDDLDLNPLTFVPAIASAIRQQIESYPTDSILEDQSDQRVIIKLNIHVGNISLVDQFEWDMSEKENSPE
KFALKLCSELGLGGEFVTTIAYSIRGQLSWHQKTYAFSENPLPTVEIAIRNTGDADQWCPLLETLTDAEMEKKIR
DODRNTRRMRRLANTAPAW

 ${\tt MPMFIVNTNVPRASVPDGFLSELTQQLAQATGKPPQYIAVHVVPDQLMAFGGSSEPCALCSLHSIGKIGGAQNRS} \\ {\tt YSKLLCGLLAERLRISPDRVYINYYDMNAANVGWNNSTFA}$

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6479/6881 FIGURE 5981A

TTGGGCGAGAGGGTGGGGCCACTCAACGCTGAGGCGGCGAATGGCCGGAGCAGACTTAAATCAAGAGGCTGGGGA GCGGCGCTTGGGGCGGCCCAGCCGCCTCCCGTTCTCTCCTCCGCAGCGGCGGCGGTGGCGGAGAAGGAACTC GACACGCACCGACCGCCCTCCCGCCCCAGCCGAAGCGGAAGCTGTAGCCCGCTCTGGGCCGGGGCCATGGGCCGC CCGCGCCGCCCGGGTCATGAGGACGGAGGCGGAGGCAGCGGGGGCCGCCGCTCGAGCCCGGGGACTTTGTGCAACT GCCTGTGCCCGTCATCCAGCAGCTCTACCACTGGGACTGTGGCCTGGCCTGCTCCAGGATGGTGCTGCAGGTACC TGGGCCAGCTGGACGACAGTGAGTTTGAGAGAGCCCTGCAGAAGCTGCAGCTGACCAGGAGCATCTGGACCATCG ACAAGAACCAGTCCTTCTACAGGAAGCACTTTGACACAGAAGAGACCCGGGTGAATCAGCTGTTTGCACAAGCAA AGGCCTGCAAGGTGCTGGTGGAGAAATGCACAGTGAGTGTGAAGGACATCCAGGCGCACCTGGCTCAGGGCCATG TGGCCATCGTGCTGGAACTCGGGGGTGCTGCACTGTGACCTGTGCTCCAGCCCTGTCAAGTACTGCTGCTTCA CCCCCAGTGGCCACCACTGCTTCTGCCGCACTCCTGACTACCAGGGCCACTTCATCGTGCTGCGTGGCTACAACC GGGCCACTGGCTGCATCTTCTACAACAACCCAGCCTATGCCGACCCAGGAATGTGCAGCACCAGCATCAGTAACT CTGGTGCGCCTAGGCCCTCGGACCCCATCCCCACCCCAGCCGGGCCCGCTCAGGATGCCCTGGCCCAGGCTTGGG GCTGCTGGGGTTGGAATGTGGAACTGCAGCCTCAGCCCATCTGGCAGAGTCCCAGGAACTCGGAAGCTGGCACAG AAGACCCCAAGCCTTGACTCCAGCTGCGCCCACAGGAAGTCCAGTCCCGACAGTGCCCTTGTTGCCTTTGAGCCA TCAGGACAGTATGTGAGTGTCTGGAGACAGCATAGCTGACCCCAATCCCCCAGGGCTGAGGACCCCTCCAGGCCC CTCTCTCCTGGAAGTGCTGCATATGCCCCTGTGCCCAGTGGTTGATGATACCACCACCACCTGCCTACCCATGGG CCCAAGTTTCTGTGGCTCATTACAGGGCATCTGACCCCTGCCACCCAGCATAGACACCCTCACAGCTGCCCTGC CATGCAGAGCCCTGGCCGCTGGAGACTCTTAAAGCCCCCACAGCCCTCCAGGTCCTCCAGCTCTGTCAGATGGAG CCCAGAGGGATCCCTGCACCCAGGAGGCCTCCTGACACCAGCCAAAATCCTGACAGCAGGGTCTGCCCTCTTGAG TGTGGGGAGCCCCTAGTCCTTTAAGGTTGGCTGCTAAGGCCTGTGCTCCAAAGCAACGGGCTGGGGCAGCCTGCA GCTGCCCACCCAACCTGGTCTTCACACCAGATTGCACAGGATACTGGGTCTTGTCTATCTTGATGGAGAAGAGGG CAGGGGTTGTTTCTTTGAGATTTAAGTTTTCATTTTTGAGGGGTAATCACCTTCAAGTAAAACAGTAATAGCAAG AGTGAAGGTACTTTGGAACCACTAACACCTCTGCACAGGGCAGTTAGCCAGCTCAAGTTCTTTTTCAGAGAAAGG GACTTGGCCAGTGGTTTAAGTACCTGCCCCTTCACCTCTCAGACGAGGCAGCTGACGAGGCAGCTGGCCCAGTCT TGGGAGTCTGCTCAGGACAGTGGTGGAGCTGGGTCTTGAACCCCAGTCTGCACCTAAAAAAACTAAAGGAAATGGA TTTTTTTTTTTTTTTTTGAGACGGAGACTCACTCTGTTGCCCAGACTGGAGTGCAGTGGCACGATCTTGGCTTAC TACAACCTCCGCCTCCTGGGTTCAAGCGATCCTCCTGCCTCAGCCCCCACTAGCTGGGACTACAGGCACATGCC ACCATGCCCGGCTAATTTTTTGTATTTTTAGTAGAGACCAGGCTTCGCCATGTTGGCCAGGCTGGTCTCGAACC CCTGAGCTCAGGTGATCCACCTGCCTCGGCCTCCCAAAGTGGGAAATGGGTCATTTTCAAAGGGGCAACAGTGAT ACCATCCCTGCACTCCTGGGTCCTGCTCTTCCAATGCCCAAGGCATGGCATGGTGGCAGCTGTGCCCCCGCCCAT TGCTTTGGAGCACAGATGACTCTGGGGGCAGAGGTGGGCTCTGTTTAGGAGGGCAGTGAGACCACCCAGCCAAAT GACCGGTGTTGGCTCTAGACTGGTCTCATCTCCATTGCCTTAATGCCAGGTGGCCCAGGAGTACCCATGCACAGC AGCTGTGGGGTGTGGGCATCTTCAGGTGGTGTTCTGGTAAAATTGTTAGAATAGCTGTATGAAGGAAACCAGTGG GAGGAAATGAAGTTTTCAGGATGGTGGGATGTGATTTAGACAGTGCACATGCTGTTAGGGCTGTCACTAGGGAGT GGCCTTCATGGAGGGTGGTAACAGCACCTCAGTCCAGCCAAAATGTTTAGAAACACTCAGTCTCTGGTCCCAGAG GACTCATCTGCCTAGGGAGGGTCACAGAGGCAGGATGTAAGACACACTGTGTTGCATTCTTGCACAAGTCATGAA AATGGAGCCAGAGAGCCTGGACATCAGGGACTTTTGCCCCACAGCACATGACACCGACAGCTGCCCAGCCTGTTCA CATGCTGGGGACCAGCACAGCACCTGAAGCCATGTGGGACAGTTGGGCCTTTGTTCATTCTAGCCACGGGGATGAA 6480/6881 FIGURE 5981B

CTGC

 $\label{thm:ctqtigvdkgyknqsfyrkhfdteetrvnqlfaqakackvlvekctvsvkdiqahlaqghvaivlvnsgvlhcdlcsspvkyccftpsghhcfcrtpdyqghfivlrgynratgcifynnpayadpgmcstsisnfeeartsygtdedilfvylds$

6483/6881 FIGURE 5984 -

 ${\tt MSIGVPIKVLHEAEGHIVTCETNTGEVYRGKLIEAEDNMNCQMSNITVTYRDGRVAQLEQVYIRGSKIRFLILPD} \\ {\tt MLKNAPMLKSMKNKNQGSGAGRGKAAILKAQVAARGRGRGMGRGNIFQKRR}$

AAGCGACAGCGCCTCACGCACCTGAGCCCCGAGGAGAAGGCGCTGAGGAGGAAACTGAAAAAACAGAGTAGCAGCT CAGACTGCCAGAGATCGAAAGAAGGCTCGAATGAGTGAGCTGGAACAGCAAGTGGTAGATTTAGAAGAAGAAGAC CAAAAACTTTTGCTAGAAAATCAGCTTTTACGAGAGAAAACTCATGGCCTTGTAGTTGAGAACCAGGAGTTAAGA CAGCGCTTGGGGATGGATGCCCTGGTTGCTGAAGAGGAGGCGAAGCCAAGGGGAATGAAGTGAGGCCAGTGGCC GGGTCTGCTGAGTCCGCAGCACTCAGACTACGTGCACCTCTGCAGCAGGTGCAGGCCCAGTTGTCACCCCTCCAG AACATCTCCCCATGGATTCTGGCGGTATTGACTCTTCAGATTCAGAGTCTGATATCCTGTTGGGCATTCTGGACA ACTTGGACCCAGTCATGTTCTTCAAATGCCCTTCCCCAGAGCCTGCCAGCCTGGAGGAGCTCCCAGAGGTCTACC CAGAAGGACCCAGTTCCTTACCAGCCTCCCTTTCTCTGTCAGTGGGGACGTCATCAGCCAAGCTGGAAGCCATTA ATGAAC<u>TAA</u>TTCGTTTTGACCACATATATACCAAGCCCCTAGTCTTAGAGATACCCTCTGAGACAGAGAGCCAAG CTAATGTGGTAGTGAAAATCGAGGAAGCACCTCTCAGCCCCTCAGAGAATGATCACCCTGAATTCATTGTCTCAG TGAAGGAAGAACCTGTAGAAGATGACCTCGTTCCGGAGCTGGGTATCTCAAATCTGCTTTCATCCAGCCACTGCC CAAAGCCATCTTCCTGCCTACTGGATGCTTACAGTGACTGTGGATACGGGGGTTCCCTTTCCCCATTCAGTGACA TGTCCTCTGCTTGGTGTAAACCATTCTTGGGAGGACACTTTTGCCAATGAACTCTTTCCCCAGCTGATTAGTG TCTAAGGAATGATCCAATACTGTTGCCCTTTTCCTTGACTATTACACTGCCTGGAGGATAGCAGAGAAGCCTGTC TGTACTTCATTCAAAAAGCCAAAATAGAGAGTATACAGTCCTAGAGAATTCCTCTATTTGTTCAGATCTCATAGA TGACCCCCAGGTATTGTCTTTTGACATCCAGCAGTCCAAGGTATTGAGACATATTACTGGAAGTAAGAAATATTA CTATAATTGAGAACTACAGCTTTTAAGATTGTACTTTATCTTAAAAGGGTGGTAGTTTTCCCTAAAATACTTAT TATGTAAGGGTCATTAGACAAATGTCTTGAAGTAGACATGGAATTTATGAATGGTTCTTTATCATTTCTCTTCCC CCTTTTTGGCATCCTGGCTTGCCTCCAGTTTTAGGTCCTTTAGTTTGCTTCTGTAAGCAACGGGAACACCTGCTG AGGGGGCTCTTTCCCTCATGTATACTTCAAGTAAGATCAAGAATCTTTTGTGAAATTATAGAAATTTACTATGTA CAATTAAAAGGTACAATGCAAAAAAAAAAAAAAAAA

MVVVAAAPNPADGTPKVLLLSGQPASAAGAPAGQALPLMVPAQRGASPEAASGGLPQARKRQRLTHLSPEEKALR RKLKNRVAAQTARDRKKARMSELEQQVVDLEEENQKLLLENQLLREKTHGLVVENQELRQRLGMDALVAEEEAEA KGNEVRPVAGSAESAALRLRAPLQQVQAQLSPLQNISPWILAVLTLQIQSLISCWAFWTTWTQSCSSNALPQSLP AWRSSQRSTQKDPVPYQPPFLCQWGRHQPSWKPLMN

FIGURE 5989

 ${\tt AGAGGGAGACGTTGAGAGAACGAGGAGGAGGAGGAGAAA} \underline{{\tt ATC}} {\tt GCGTCCACGGATTACAGTACCTATAGCCA}$ AGCTGCAGCGCAGCAGGGCTACAGTGCTTACACCGCCCAGCCCACTCAAGGATATGCACAGACCACCCAGGCATA TGGGCAACAAAGCTATGGAACCTATGGACAGCCCACTGATGTCAGCTATACCCAGGCTCAGACCACTGCAACCTA TGGGCAGACCGCCTATGCAACTTCTTATGGACAGCCTCCCACTGGTTATACTACTCCAACTGCCCCCCAGGCATA CAGCCAGCCTGTCCAGGGGTATGGCACTGGTGCTTATGATACCACCACTGCTACAGTCACCACCCAGGCCTC TACAAGACCGCAGGATGGAAACAAGCCCACTGAGACTAGTCAACCTCAATCTAGCACAGGGGGTTACAACCAGCC ACCTCCATCCTACCCTCCTACCAGCTATTCCTCTACACAGCCGACTAGTTATGATCAGAGCAGTTACTCTCAGCA GAACACCTATGGGCAACCGAGCAGCTATGGACAGCAGAGTAGCTATGGTCAACAAAGCAGCTATGGGCAGCAGCC TCCCACTAGTTACCCACCCCAAACTGGATCCTACAGCCAAGCTCCAAGTCAATATAGCCAACAGAGCAGCAGCTA CGGGCAGCAGAGTTCATTCCGACAGGACCACCCCAGTAGCATGGGTGTTTATGGGCAGGAGTCTGGAGGATTTTC CGGACCAGGAGAACCGGAGCATGAGTGGCCCTGATAACCGGGGCAGGGGAAGAGGGGGATTTGATCGTGGAGG CATGAGCAGAGGTGGGCGGGGAGGAGGACGCGGTGGAATGGGCAGCGCTGGAGAGCGAGGTGGCTTCAATAAGCC TGGTGGACCCATGGATGAAGGACCAGATCTTGATCTAGGCCCTCCTGTAGATCCAGATGAAGACTCTGACAACAG TGCAATTTATGTACAAGGATTAAATGACAGTGTGACTCTAGATGATCTGGCAGACTTCTTTAAGCAGTGTGGGGT TGTTAAGATGAACAAGAGAACTGGGCAACCCATGATCCACATCTACCTGGACAAGGAAACAGGAAAGCCCAAAGG TGAGGGCAGAGGCATGCCACCACCCCGTGGAGGTCCAGGAGGCCCAGGAGGTCCTGGGGGACCCATGGGTCG CATGGGAGGCCGTGGAGGAGATAGAGGAGGCTTCCCTCCAAGAGGACCCCGGGGTTCCCGAGGGAACCCCTCTGG ${\tt AGGAGGAAACGTCCAGCACCGAGCTGGAGACTGGCAGTGTCCCAATCCGGGTTGTGGAAACCAGAACTTCGCCTG}$ GAGAACAGAGTGCAACCAGTGTAAGGCCCCAAAGCCTGAAGGCTTCCTCCCGCCACCCTTTCCGCCCCCGGGTGG TGATCGTGGCAGAGGTGGCCCTGGTGGCATGCGGGGAGGAAGAGGTGGCCTCATGGATCGTGGTGGTCCCGGTGG AATGTTCAGAGGTGGCCGTGGTGGAGACAGAGGTGGCTTCCGTGGTGGCCGGGGCATGGACCGAGGTGGCTTTGG TGGAGGAAGACGAGGTGGCCCTGGGGGCCCCCTGGACCTTTGATGGAACAGATGGGAGGAAGAAGAGAGGACGACG ${\tt TGGAGGACCTGGAAAAATGGATAAAGGCGAGCACCGTCAGGAGCGCAGAGATCGGCCCTAC{\tt TAG}{\tt ATGCAGAGACC}}$ CCGCAGAGCTGCATTGACTACCAGATTTATTTTTTAAACCAGAAAATGTTTTAAATTTATAATTCCATATTTATA ATGTTGGCCACAACATTATGATTATTCCTTGTCTGTACTTTAGTATTTTCACCATTTGTGAAGAAACATTAAAA GAACCCCTTGTGAGCATGCTCAGTATCATTGTGGAGAACCAAGAGGGCCTCTTAACTGTAACAATGTTCATGGTT

MASTDYSTYSQAAAQQGYSAYTAQPTQGYAQTTQAYGQQSYGTYGQPTDVSYTQAQTTATYGQTAYATSYGQPPT
GYTTPTAPQAYSQPVQGYGTGAYDTTTATVTTTQASYAAQSAYGTQPAYPAYGQQPAATAPTRPQDGNKPTETSQ
PQSSTGGYNQPSLGYGQSNYSYPQVPGSYPMQPVTAPPSYPPTSYSSTQPTSYDQSSYSQQNTYGQPSSYGQQSS
YGQQSSYGQQPPTSYPPQTGSYSQAPSQYSQQSSSYGQQSSFRQDHPSSMGVYGQESGGFSGPGENRSMSGPDNR
GRGRGGFDRGGMSRGGRGGGRGGMGSAGERGGFNKPGGPMDEGPDLDLGPPVDPDEDSDNSAIYVQGLNDSVTLD
DLADFFKQCGVVKMNKRTGQPMIHIYLDKETGKPKGDATVSYEDPPTAKAAVEWFDGKDFQGSKLKVSLARKKPP
MNSMRGGLPPREGRGMPPPLRGGPGGPGGPGGPMGRMGGRGGDRGGFPPRGPRGSRGNPSGGGNVQHRAGDWQCP
NPGCGNQNFAWRTECNQCKAPKPEGFLPPPFPPPGGDRGRGGPGGMRGGRGGLMDRGGPGGMFRGGRGGDRGGFR
GGRGMDRGGFGGGRRGGPGGPPGPLMEQMGGRRGGRGGPGKMDKGEHRQERRDRPY

GGACGCATAGAGCTGCGGCTCGGGCGGCCCCCCTGCGGCCCGGCCCGGCCCCGGCCCCGCTGGGGCAAT ${f TG}$ GCAGACCCAGTGGCGGGCATCGCGGGTTCGGCGGCCAAGAGCGTGCGGCCATTTCGCTCCAGTGAGGCCTACG TGGAGGCCATGAAGGAGGACCTGGCCGAGTGGCTCAATGCCTTGTACGGCCTGGGTCTCCCGGGTGGTGGCGATG GCTTCCTGACAGGGCTGGCCACGGGCACGACCCTGTGCCAACATGCCAACGCCGTGACCGAGGCTGCCCGTGCAT TGGCAGCCGCCCGGCCCGAGGTGTGGCCTTCCAGGCGCACAGTGTAGTGCCTGGCTCCTTCATGGCGCGCG ACAACGTGGCCACCTTCATCGGCTGGTGCCGCGTGGAGCTGGGTGTGCCGGAGGTGCTCATGTTTGAGACTGAGG ACCTGGTGCTGCGCAAGAACGAGAAGAGCGTGGTGCTGTGCCTGGAGGTGGCGCGGGGGGGCACGCCTGG GCCTGCTGGCCCCACGCCTCGTGCAGTTTGAGCAGGAGATTGAGCGGGAGCTGCGTGCTGCACCCCCAGCCCCCA ACGCCCTGCCGCTGGGGAGGACACCACTGAAACCGCCCCCGCACCAGGGACTCCTGCCCGCGGCCCCCGCATGA CACCCAGCGACCTGCGCAACCTCGACGAGCTGGTGAGGGAGATTCTGGGCCGCTGCACCTGACCAGTTTC $\verb|CCATGATCAAGGTCTCAGAGGGGAAGTACCGTGTGGGGGGACTCGAGCCTGCTCATCTTTGTGCGGGTGCTGAGGA|\\$ GCCACGTGATGGTGCGAGTGGTGGTGGCTGGGACACGCTGGAGCATTACCTGGACAAGCACGACCCGTGCCGCT GCTCCTCCACTGCTCATCGCCCACCCCAGCCGAGGGTCTGCACCTTTTCTCCACAGAGGGTGTCGCCCACCACCA GTCCCCGCCTGCTAGCCCAGTCCCTGGGAGTGAGCGCCGGGGCTCCCGGCCTGAGATGACTCCCGTTAGCTTAC GAAGCACAAAGGAGGGCCCGAGACCCCACCCAGGCCCCGGGATCAGCTGCCCCCCCATCCCCGCTCCCGCCCCT ACTCCGGGGACAGTGACTCCTCAGCCTCCTCCGCCCAGAGCGGCCCCCTTGGTACCCGCAGTGATGACACAGGCA CTGGCCCCGGAGGGAGCGACCCAGCCGGCGGCTGACCACAGGCACCCCGGCCTCTCCGAGACGGCCTCCTGCCC TGCGCAGCCAGTCCCGAGACCGGCTGGATCGCGGCCCGGGCCCCCGGGGGGCCCCAGGAGGCAGGGGAGCCCAGCTGT CGGTCCCCAGCCCTGCCCGGCGGGCCCGGAGCCAGAGCCGCGAGGAGCAGGCTGTGCTTGTTGCGCAGGGATC GAGACGGGCAGCACTCATGGGTGCCAAGGGGCAGGGGCAGTGGGGGGCTCGGGCAGGAGCACCCCCAGACTCCCC GTGCCCGCAGCCCTGCAGCACCCCGGCTTTCCCGGGTCTCCAGCCCCAGTCCAGAGTTGGGCACCACACCGGCCA GCATCTTCCGCACACCCCTGCAGCTCGACCCGCAGCAGCAGCAGCAGCTGTTCCGGCGCCTGGAAGAGGAGTTCC TGGCCAATGCCCGGGCCCTTGAGGCTGTTGCTAGCGTGACCCCCACTGGACCAGCCCCTGACCCAGCTCGGGCCC CCGACCCTCCAGCTCCTGACTCTGCCTATTGTTCCTCCAGTTCCTCCTCTTCGTCCCTCAGCGTCCTGGGTGGCA AATGTGGCCAACCTGGGGACTCTGGCCGGACGGCCAATGGGCTGCCTGGGCCCCGAAGCCAAGCCCTTTCCAGCT CCTCCGATGAAGGCAGCCCCTGCCCTGGCATGGGGGGGCCACTAGATGCACCTGGGAGCCCCCTGGCTTGCACTG AACCCTCGAGGACCTGGGCACGGGGTCGGATGGACACACAGCCAGACCGTAAACCCTCACGTATCCCCACGCCTC GGGGCCCCCGCCCCCCCCGGACCCGCAGAGCTGGGGACATGGCATGCCCTGCACTCAGTCACCCCGAGGGCTG AGCCAGATTCCTGGATG<u>TGA</u>TGGACCAGCTCAGCTGTCCCCAGACCCCATCCCTTCTCCTTTTCCTTTGTGGCCT TAACCCTTCTGCATCAGGGAGCCCCCTCTGCCTCTTGAGTACCAGACCTCATGGGACCAGACCCCTTGGGACCAC ATGGCACAATGGGACCTCTGTTGTACATTCCGGTTGGGGGATGAGCGTTGCTATTTAATTACTAATATTATTGAA TGCCTTAGAGGAGGCCGGGCGAGCCCGGTGTTCTGAAGACCTGTGGCCCAGCAGAGCCTCTGACAGTAAAGTTTT

MADPVAGIAGSAAKSVRPFRSSEAYVEAMKEDLAEWLNALYGLGLPGGGDGFLTGLATGTTLCQHANAVTEAARA LAAARPARGVAFQAHSVVPGSFMARDNVATFIGWCRVELGVPEVLMFETEDLVLRKNEKSVVLCLLEVARRGARL GLLAPRLVQFEQEIERELRAAPPAPNAPAAGEDTTETAPAPGTPARGPRMTPSDLRNLDELVREILGRCTCPDQF PMIKVSEGKYRVGDSSLLIFVRVLRSHVMVRVGGGWDTLEHYLDKHDPCRCSSTAHRPPQPRVCTFSPQRVSPTT SPRPASPVPGSERRGSRPEMTPVSLRSTKEGPETPPRPRDQLPPHPRSRRYSGDSDSSASSAQSGPLGTRSDDTG TGPRRERPSRRLTTGTPASPRRPPALRSQSRDRLDRGRPRGAPGGRGAQLSVPSPARRARSQSREEQAVLLVRRD RDGQHSWVPRGRGSGGSGRSTPQTPRARSPAAPRLSRVSSPSPELGTTPASIFRTPLQLDPQQEQQLFRRLEEEF LANARALEAVASVTPTGPAPDPARAPDPPAPDSAYCSSSSSSSSSLSVLGGKCGQPGDSGRTANGLPGPRSQALSS SSDEGSPCPGMGGPLDAPGSPLACTEPSRTWARGRMDTQPDRKPSRIPTPRGPRRPSGPAELGTWHALHSVTPRA EPDSWM

6492/6881 FIGURE 5993A

ACCACTTGAAGAGAGGTTCCTAATACTAGACAGATGGAGAGTGGCTTGGCTGTTTCCCCCTGCATATTGGGGTTG GCCACCACCTCCCTCGGGGGCCTCCGCGCTGAGCTTCCGGCCTCTACGCCTCGCTTCCGGTCGGCCCCCCTTCC TTACTTCCGGTTCTCTATGGTGCGCGGGCAAGCTTTGCTCCGCCTCCGGCAGTGGCTTACTCCCGGTGCCAGGTT CTTGGAGCTGTGAGGAGCAACCATGTCATCAGAATCGAGCAAAAAACGGAAGCCCAAAGTGATCCGAAGCGA TGGAGCCCCAGCTGAAGGAAAGCGGAATCGATCTGACACCGAGCAGGAAGGTAAATACTACAGTGAGGAGGCCGA GGTGGATCTGCGGGACCCTGGCAGAGACTATGAGTTATACAAGTACACCTGCCAGGAGCTACAGAGGCTGATGGC TGAGATCCAAGACCTGAAGAGCAGGGGTGGCAAGGATGTGGCAATAGAAATAGAAGAACGGAGGATCCAGAGCTG TGTGCATTTCATGACTCTAAAGAAGCTTAACCGATTAGCCCACATCAGGTTGAAGAAAGGAAGAGATCAGACCCA CGAGGCTAAGCAGAAAGTAGATGCCTATCATCTGCAGCTCCAGAACCTGTTGTATGAGGTGATGCACCTACAGAA GGAGATCACCAAATGTTTGGAGTTTAAGTCAAAGCATGAAGAAATTGATCTGGTCAGTTTAGAGGAGTTTTATAA GGAGGCTCCACCAGATATCAGCAAGGCCGAAGTCACCATGGGAGACCCTCACCAGCAAACACTGGCACGTCTGGA CTGGGAGCTGGAGCAGCGGAAAAGGCTGGCAGAGAAGTACCGAGAGTGCCTATCTAACAAGGAGAAGATTCTCAA GGAGATTGAGGTGAAGAAGGAGTACCTGAGCAGCCTCCAGCCCCGCCTCAACAGCATCATGCAGGCTTCCCTTCC GGTGCAGGAGTACCTGTTTATGCCATTCGACCAGGCTCACAAGCAGTATGAGACAGCCAGACACCTGCCGCCTCC CCTCTATGTCCTCTTTGTTCAGGCCACTGCGTATGGGCAGGCCTGTGATAAGACGTTATCTGTGGCAATCGAAGG CAGTGTGGATGAAGCCAAGGCTCTGTTCAAACCTCCAGAGGACTCCCAAGATGACGAGAGTGACTCAGATGCCGA GGAGGAGCAGACTACGAAGCGCCGGAGACCCACACTGGGGGTTCAGTTGGACGACAAACGCAAGGAGATGCTGAA GAGGCACCCACTGTCTGTCATGCTCGACCTGAAGTGCAAAGATGACAGTGTGCTTCACCTGACTTTCTACTACCT CATGAACCTCAACATCATGACAGTAAAAGCCAAAGTGACAACTGCCATGGAGCTGATCACCCCCATCAGTGCAGG CAATCAGTATCAGTTTGATAAAGTTGGCATCCTGACTTTGAGCGACTATGTACTTGAGCTAGGTCACCCCTATTT GTGGGTGCAGAAGCTGGGTGGCCTCCACTTCCCCAAAGAGCAGCCCCAGCAAACAGTGATTGCTGACCACTCGCT GAGCGCCAGCCACATGGAGACCACCATGAAACTTCTGAAGACCAGGGTGCAGTCCCGCCTGGCCCTCCACAAACA GTTTGCATCCCTAGAACATGGCATTGTGCCAGTTACCAGTGATTGCCAGTACCTCTTCCCTGCCAAGGTTGTCTC TCGCCTGGTGAAATGGGTGACAGTTGCCCATGAGGATTACATGGAGCTGCACTTCACCAAAGACATTGTGGATGC GGGACTGGCTGGGGACACCAATCTCTACTACATGGCGCTCATCGAAAGGGGCACAGCCAAACTGCAGGCCGCTGT GGTGTTGAACCCTGGCTACTCCTCCATCCCACCTGTTTTCCAGCTCTGTTTGAACTGGAAAGGGGAGAAAACCAA CAGCAACGATGACAACATTCGGGCCATGGAGGGCGAAGTCAATGTGTGCCTACAAGGAGCTGTGGGCCCTTGGCC TGACGACAGTGTGGAGGGGCCCAAGGAATTTCCCCAGGAGAAGATGTGTCTGCGGCTCTTCAGGGGTCCTAGCAG GATGAAGCCATTTAAATACAACCATCCTCAGGGATTCTTCAGCCATCGCTGATCTCCCGCGCAGACCGTTGTTTC CCCCAAGGCCTCACCCTGAGCACTGGGCTTCTGCTTTCTGCTCTGGCCCACATGTGACTCTTGATATTCTCCAAA GACACCAGCCAATTAAAAAGCGTCACCTGACCAGTGGCCTTTGTCTGTGGTTCCTGGCAAGGTGGCTTTGCAGTC TGGAAGGGCAGGTGGGAGCTGTGACACAGTGTGAAAAAGCATTTGTAGAGAGACTTTTTCTCAGCAGCCAATAAA AGCAGAGTGGAAAAAGATTCCAATTCTGCAGAGAGATGCTCACCTCTTGTCTACGCACACCCTATTTGTGCTTTG CGGGGTGAGGTCCTCATGATCTTGTATTTATCCCAAGTTCCTGCTGTTAAGAGGTGGTAGGAGAAGCCAAAG GCAGCAGAGCACAAAAAGCAAAACTCTTCCCTCCCCACCCGCTCTTCCCATTAGTCCTGTCAGGGTTGCCGATGG ACAAATTGTCTCTGATCGTTGGATGTTATAAATGTCTGACAGTGCAGTGCAAACAGAAGACAAACTCAGTTGATC CTTGAACAACTCAGGGGTTAGGGGCACCAACACCCCCTGCCCTGCACAGTTGAAAAATCCGTGTATAACTTTTGA CAGTACATATTTCAGTATATATTTTGTATCTTATACACTGTATTCTTACAATACAGTAAACTAGAGAAAAGAAA ATGTTATAAGGAAAGTCACAAGGGGGCCTGAGTGCAGTGGCTCACGTCTGTAATCCCAGCACTTTGGGAGGCCAA GGCGGGTGGATCACTTGAGGTCAGGAGTTTGAGACCAGCCTGGCCGACATGGTGAAACCCTGTCTCTACTAAAAA CATGGAAATTAGCCAAGCGTGGTGGCGCATGCCTGTAGTCCCAGTTACTCAGGAGGCTGAGGCAGAATTACTTGA ACCCATGAGGCAGAGGTTGCAGTAAGCCAAGATCACGCTCCTGCGCTCCGGCTTGGGCGAGAGTGAGACTCCGTC AGGTCTTCACATACTGTCTCAGGGTTGAATAGTCTAAGGAAGAGGGGGGTTGGTCTTGGTGTCTCAGGGATGGC

6493/6881 FIGURE 5993B

GCCTGGGCAACGTAGTGAGAGACCCTGTATCTACAAAAAATTTAAAAAATCAGCCAGGTGTGGTGGTATGCACCAA TAGTCCCAGTTACTCAGAAGGCTGAGGTGGGCGGATGACTGGAGTCCAGGAGTTCAAGGTAGCAGTGAGCTATTC TGCATATAATAGACCCACAGAGTCCAAACTATTGTTCAGAGATCAACTGTACTTCACAGAGAGTAATTCTAAGTC AGGTAACATTTGAGGAGAATATTTTTTTTTTTTTTGAGACAGGGTCTTGCTCTGTTGTCCAGGCTGGAGTGCAGTG GCACGAACACAGCTCACTGCCGCCTCAACCTCTCCTGGGTTCAAGTGATCCTCCTGCCTCAGCCTCCCAAGTAGC TGGGACCACGGGGGGGGCCACCATTTCTGGCTAATTTTTAAATTTTTTGTAGAGGCGGGATCCCACTATTTTTC ${\tt CCAGGCTGGTCTCAAACTCCTGGGCTCAAATGATCCTCCCACCTCGGCCTCCCAAAGTGCTAGGATTATAGGCAT}$ GAGCCACCACCCGGCCTGAGTAGAGTCTTTAAGGTAATGACAAAAGTGCCTCAAAATATAATTATTTGATTAA GAGAAGTCTTGGGAAGATAGGTAACAACCTTTAAAATGTTCATAAAATTACATCCTTTGTAATACTCCTGCAAGT CAAAGTAAAGGATGGCATAGACTATTCTTGGACAGTTTTGTCAAAAAGTGTATCTTGACCCCACCATCAGTACTC $\hbox{\tt CATTCTTCATTTTAAAAAATAAGATGGGCTGGGCACAGTGGCTTACGCCTTTAATATCAGTACTTTGGGAGGCTG}$ GTGGGCGGATCACCTGAGATCAGGAGTTCAAGACCAGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAAT ACAAAAATTAGCTGGGCATGGTGGTGCGCCCTGTAATCCCAGCCACTCGGGAGGCTGAGGCAGGAGAATTGCTT GAATCCCCGAGGCGGAGGTTGCACTGAGCCGAGATGGTGCCACTGCACCATCTGGACAACAGAGCAAGACTCCGT CTTGG

FIGURE 5994

GGGGACCCGCGCAGCCCAGACCGTTCCCGGGCCGGCCAGCCGGCACCATGGTGGCCCTGAGGCCTGTGCAGCAAC GGGGCCATCGCTTCCCGCATGAGCTTCAGCTCTCTCAAGAGGAAGCAACCCAAGACGTTCACCGTGAGGATCGTC ACCATGGACGCCGAGATGGAGTTCAATTGCGAGATGAAGTGGAAAGGGAAGGACCTCTTTGATTTGGTGTGCCGG ACTCTGGGGCTCCGAGAAACCTGGTTCTTTGGACTGCAGTACACAATCAAGGACACAGTGGCCTGGCTCAAAATG GACAAGAAGGTACTGGATCATGATGTTTCAAAGGAAGAACCAGTCACCTTTCACTTCTTGGCCAAATTTTATCCT GAGAATGCTGAAGAGGAGCTGGTTCAGGAGATCACACAACATTTATTCTTCTTACAGGTAAAGAAGCAGATTTTA GATGAAAAGATCTACTGCCCTCCTGAGGCTTCTGTGCTCCTGGCTTCTTACGCCGTCCAGGCCAAGTATGGTGAC TACGACCCCAGTGTTCACAAGCGGGGATTTTTGGCCCCAAGAGGGAATTGCTTCCAAAAAGGGTAATAAATCTGTAT CAGATGACTCCGGAAATGTGGGAGGAGAATTACTGCTTGGTACGCAGAGCACCGAGGCCGAGCCAGGGATGAA GCTGAAATGGAATATCTGAAGATAGCTCAGGACCTGGAGATGTACGGTGTGAACTACTTTGCAATCCGGAATAAA AAGGGCACAGAGCTGCTTGGAGTGGATGCCCTGGGGCTTCACATTTATGACCCTGAGAACAGACTGACCCCC AAGATCTCCTTCCCGTGGAATGAAATCCGAAACATCTCGTACAGTGACAAGGAGTTTACTATTAAACCACTGGAT AAGAAAATTGATGTCTTCAAGTTTAACTCCTCAAAGCTTCGTGTTAATAAGCTGATTCTCCAGCTATGTATCGGG AACCATGATCTATTTATGAGGAGAAGGAAAGCCGATTCTTTGGAAGTTCAGCAGATGAAAGCCCAGGCCAGGGAG AGGGATGAGTTGGAGAGGAGGCTGCTGCAGATGAAAGAAGCAACAATGGCCAACGAAGCACTGATGCGGTCT GAGGAGACAGCTGACCTGTTGGCTGAAAAGGCCCAGATCACCGAGGAGGAGGCCAAAACTTCTGGCCCAGAAGGCC GCAGAGGCTGAGCAGGAAATGCAGCGCATCAAGGCCACAGCGATTCGCACGGAGGAGGAGAAGCGCCTGATGGAG CAGCTGAAGCAGGACCTGCAGGAAGCACGCGAGGCGGAGCGAAGAGCCAAGCAGAAGCTCCTGGAGATTGCCACC AAGCCCACGTACCCGCCCATGAACCCAATTCCAGCACCGTTGCCTCCTGACATACEAAGCTTCAACCTCATTGGT GACAGCCTGTCTTTCGACTTCAAAGATACTGACATGAAGCGGCTTTCCATGGAGATAGAGAAAAAAGTGGAA TACATGGAAAAGAGCAAGCATCTGCAGGAGCAGCTCAATGAACTCAAGACAGAAATCGAGGCCTTGAAACTGAAA $AAAAAGCTCACCTTGCAGAGCGCCAAGTCCCGAGTGGCCTTCTTTGAAGAGCTC{\color{red} TAG}{CAGGTGACCCAGCCACCC}$ GCTGGGGGTTTCCGTGGGAGCTCCAGAACTTTCCCCAGCTGAGTGAAGAGCCCAGCCCCTCTTATGTGCAATTGC CTTGAACTACGACCCTGTAGAGATTTCTCTCATGGCGTTCTAGTTCTCTGACCTGAGTCTTTGTTTTAAGAAGTA TTTGTCT

MAGAIASRMSFSSLKRKQPKTFTVRIVTMDAEMEFNCEMKWKGKDLFDLVCRTLGLRETWFFGLQYTIKDTVAWL KMDKKVLDHDVSKEEPVTFHFLAKFYPENAEEELVQEITQHLFFLQVKKQILDEKIYCPPEASVLLASYAVQAKY GDYDPSVHKRGFLAQEELLPKRVINLYQMTPEMWEERITAWYAEHRGRARDEAEMEYLKIAQDLEMYGVNYFAIR NKKGTELLLGVDALGLHIYDPENRLTPKISFPWNEIRNISYSDKEFTIKPLDKKIDVFKFNSSKLRVNKLILQLC IGNHDLFMRRKADSLEVQQMKAQAREEKARKQMERQRLAREKQMREEAERTRDELERRLLQMKEEATMANEALM RSEETADLLAEKAQITEEEAKLLAQKAAEAEQEMQRIKATAIRTEEEKRLMEQKVLEAEVLALKMAEESERRAKE ADQLKQDLQEAREAERRAKQKLLEIATKPTYPPMNPIPAPLPPDIPSFNLIGDSLSFDFKDTDMKRLSMEIEKEK VEYMEKSKHLQEQLNELKTEIEALKLKERETALDILHNENSDRGGSSKHNTIKKLTLQSAKSRVAFFEEL

GGCACGAGGCCGGAAGTGCGGGCGCTCAGGGAGCTGTCACCGTGGTCGGCGGCGGCGGCGGCGGCGGCGGCACAG AGCCGGTGGTGGAGCCGCCGAGGAGGGTCACGCAGCACAATGCCAGCTCTGCCCCTGGACCAACTCCAGATCACC CACAAGGACCCGAAGACAGGAAAGCTGAGGACTTCACCAGCGCTGCACCCCGAGCAGAAGGCAGACCGGTATTTT GTGTTATACAAACCGCCCCTAAAGACAACATTCCCGCCCTAGTGGAGGAGTACCTGGAACGCGCCACCTTCGTA GCCAATGACCTCGACTGGCTCCTGGCCTTGCCTCACGATAAATTCTGGTGCCAGGTGATCTTTGACGAGACTCTA GTTGACATGCAGAAGCGCCTCCATCGAAGTGTTTTTCTCACCTTCCTCCGCATGTCCACTCACAAGGAATCCAAA GATCACTTCATTTCCCCTTCTGCGTTTGGAGAAATCCTCTACAATAACTTCCTCTTTGACATTCCAAAGATCCTG GACCTCTGCGTGCTCTTTGGAAAAGGCAACTCACCACTGCTCCAGAAGATGATAGGAAACATCTTTACACAGCAG CCAAGTTACTACAGTGACCTGGATGAAACCCTGCCTACCATCCTTCAGGTCTTCAGCAATATCCTCCAGCACTGT GGTTTGCAAGGGGACGGGCCAATACCACACCCCAGAAGCTTGAGGAGAGGGGCCGATTGACCCCCAGTGACATG CCTCTCCTGGAATTAAAGGACATTGTTCTCTACCTTTGTGATACCTGCACCACACTTTGGGCCTTTCTGGATATC CCCGAAATGGAGTCTGCAATTAAGAAGAGGAGGCTTGAAGATAGCAAGCTTCTTGGTGACCTGTGGCAGAGGCTC TCCCATTCCAGGAAGAAGCTAATGGAGATTTTCCACATCATCCTGAACCAGATCTGCCTCCTTCCCATCCTAGAA AGCAGCTGTGACAACATTCAGGGCTTCATCGAAGAGTTCCTTCAGATCTTCAGCTCCTTGCTGCAGGAGAAGAGG TTCCTCCGGGACTATGATGCACTCTTCCCCGTGGCCGAAGACATCAGCTTGCTGCAGCAGGCCTCATCAGTCTTG GACGAGACGCGGACTGCCTACATCCTCCAGGCAGTCGAGAGTGCATGGGAAGGGGTGGACAGACGGAAAGCCACA GATGCTAAAGACCCATCGGTGATTGAGGAGCCTAATGGGGAGCCTAACGGGGTCACGGTGACAGCAGAGGCAGTC AGTCAAGCATCACATCCGGAGAACTCGGAGGAAGAGGGGGTGCATGGGAGCAGCCGCGGCTGTGGGCCCTGCC ATGTGTGGGGTGGAACTGGACTCTCTCATCTCCCAAGTGAAGGACCTGCCAGACCTTGGTGAGGGCTTCATC CTGGCCTGCCTGGAGTACTACCACTACGACCCAGAGCAGGTGATCAACAATATCCTGGAGGAGCGGCTGGCCCCC ACCCTCAGCCAGCTGGACCGCAACCTAGACAGAGAAATGAAACCAGACCCTACACCCCTGCTGACGTCTCGCCAC AACGTCTTCCAGAATGACGAGTTTGATGTGTTCAGCAGGGACTCAGTAGACCTGAGCCGGGTGCACAAGGGCAAG AGCACCAGGAAGGAGGAAAACACGCGGAGTTTGCTGAACGACAAGCGTGCAGTGGCGGCACAGCGGCAGCGCTAC GAGCAGTACAGCGTGGTGGAGGAGGTGCCACTGCAGCCAGGCGAGAGCCTGCCCTACCACAGTGTCTACTAC GAGGATGAGTACGATGACACATACGATGGCAACCAGGTGGGCGCCAATGATGCAGACTCTGATGACGAGCTCATC AGCCGCAGGCCATTCACCATCCCTCAGGTGCTGAGAACCAAAGTGCCTAGAGAAGGGCAGGAGGAGGATGACGAC GATGAGGAAGACGATGCTGACGAGGAGGCTCCCAAGCCCGACCATTTTGTTCAGGACCCTGCAGTGCTGAGAGAG AAGGCAGAAGCCAGGCGCATGGCCTTTCTCGCCAAGAAAGGGTACCGGCATGACAGCTCAACAGCAGTGGCCGGC ${\tt GCCAACCACACCGGAGAACCATGGCCGAACGGAGGAGGAAGGCATGATCCCATCC} {\tt TGA}{\tt GACCTGGTGCAG}$ GGCCAGTGGGGAGGCAGCGGCACCAGACTCACCAGGCCGTGCTCCCATCGCCTGGGGCCTCCTCACTAGGGGCCCC ATGAGCGCCTTCCTGCAGAACACACAGTGCCTTATGCCACAGCCGAAGAATCCGTGGGGCCGGCAAGCAGGCACC TTCCCCCAGCTGCGCTAGCGGGAAAGAGATGGGGATGGAGTCCCAAGGCAAGCGCCCCAAACCTCGGGCCACAAG ACACCACTTCCCCTTTACCCTGGACAGCAGGAAACCTGTATATTCAAAAACACAAAAAGTCCTGCTAATAAAATT TTTGACCCTTTCAAAAAAAAAAAAAAAAAAAAAAA

MPALPLDQLQITHKDPKTGKLRTSPALHPEQKADRYFVLYKPPPKDNIPALVEEYLERATFVANDLDWLLALPHD
KFWCQVIFDETLQKCLDSYLRYVPRKFDEGVASAPEVVDMQKRLHRSVFLTFLRMSTHKESKDHFISPSAFGEIL
YNNFLFDIPKILDLCVLFGKGNSPLLQKMIGNIFTQQPSYYSDLDETLPTILQVFSNILQHCGLQGDGANTTPQK
LEERGRLTPSDMPLLELKDIVLYLCDTCTTLWAFLDIFPLACQTFQKHDFCYRLASFYEAAIPEMESAIKKRRLE
DSKLLGDLWQRLSHSRKKLMEIFHIILNQICLLPILESSCDNIQGFIEEFLQIFSSLLQEKRFLRDYDALFPVAE
DISLLQQASSVLDETRTAYILQAVESAWEGVDRRKATDAKDPSVIEEPNGEPNGVTVTAEAVSQASSHPENSEEE
ECMGAAAAVGPAMCGVELDSLISQVKDLLPDLGEGFILACLEYYHYDPEQVINNILEERLAPTLSQLDRNLDREM
KPDPTPLLTSRHNVFQNDEFDVFSRDSVDLSRVHKGKSTRKEENTRSLLNDKRAVAAQRQRYEQYSVVVEEVPLQ
PGESLPYHSVYYEDEYDDTYDGNQVGANDADSDDELISRRPFTIPQVLRTKVPREGQEEDDDDEEDDADEEAPKP
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SKGMIPS

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6505/6881 FIGURE 6005A

CGAGACTCAGATTGTCTGAATTGAGCTATCGCAACTTAATGCTAAAAGCTCCTTAAAGCTACAGATTTATGACAT ACATCTCTGCATATATTTTGGATAGCTACTAGGTTACTTTAACTGTCATTAAGGAGCACAGACTTACTGAAGCTT TACTGGACAGAATCCTGGGAAATCGATATCATTATAAGGTTATATTTCCCAGTTAGCGGGTGAAGGGCTGGAGAC CTTATTGCAGTCATGGCTTTCACAAATTACAGCAGTCTGAATCGAGCTCAGCTAACCTTTGAATATCTGCACACA AATTCGTAAGTATCCTCTAGGTGCCACTGAGGTAACCAGTAACTCGTTCCTTGATATTATATGGAAATCGTTTCC CCAGAAAATTTTGCTTTTTCACTTTTTGAGATGTATCCCACTGGAGTGAAATGTGTCACTGGATATCTTGAGCTC TGTATTGAAGAACTGAGATCAGTGAAATACTTGTTGCTAATCCAGAAGAATCTGATTTTTGTTTATTGGATCAAA ACAAATACTGCTCTATTGGATCGCCAAATGTTGGACTATTTTAGTATCAACCGTTTCCCCTCTGTAGTGACAACG TCCTAAACAGTTAGGTTTATAACAAGTGTTTACTTTCTAACAAGAAAACAGAAGACATTTAAATGACAACTTTCA AGAAGAAAATTTTTATTTTTCAGAAGTTGGCATTATCTTCCTGGCAGATTGCTCACATCCAATATTATTTGTAT ATGCTAAACAGGAAACGGCAACTTGTTTATATCTCTATTTAGATAGTCTTTCCCCCAAAATTTCCACAGAAACATA CAGTGTTCATGGTTCTTGAGTTCATGAAGGAGTAATCTAATCACTCCAACATGGTCTGGAATGTTTCAGGTTTAA TCCATATGCCCACTCTCTTGGAGGCTGTCCAGTAGCGTCAAAACTTTAGTGTTTTAATACATTCACCTGTTACTT TTGAGATGAAGTTCACCTTTCTTGGATCACATGCAAAGGATGTTTAGGTCTGTGAAGAAAAGAATTTCTAGGCCG GGTGCTGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGAACCACTCACGAATTCTTGTTTGGTGCTC TTGCTGAACTGGTTGATAATGCAAGAGATGCTGATGCCACCAGAATAGATATTTATGCAGAAAGACGAGAGGACC $\tt TTCGAGGAGGATTT{\color{red} ATG} CTTTGCTTTTTGGATGATGGAGCAGGAATGGATCCAAGTGATGCTGCCAGTGTGATCC$ CGTTTCATGAGGAAGAAGGCATTGATGAAGTGATAGTCCCACTGCCCACCTGGAATGCTCGGACCCGGGAACCTG TCACAGACAATGTAGAGAAATTTGCCATTGAGACAGAACTCATCTATAAGTACTCTCCATTCCGCACTGAGGAGG AAGTGATGACCCAGTTTATGAAGATTCCTGGGGACAGCGGAACATTGGTGATCATCTTCAATCTCAAACTCATGG ATAATGGAGAGCCAGAACTAGACATAATCTCAAATCCAAGAGATATCCAGATGGCAGAGACGTCCCCAGAGGGCA CGAAGCCAGAGCGCCCCCGTTCCGTGCCTATGCCGCTGTGCTCTATATTGATCCCCGGATGAGGATCTTCATCC ATGGGCACAAGGTGCAGACCAAGAGGCTCTCCTGCTGCCTGTACAAGCCCAGGATGTACAAGTACACGTCAAGCC GTTTCAAGACCCGTGCGGAGCAGGAGGTGAAGAAAGCAGGAGCACGTAGCAAGGATTGCTGAAGAGAAGGCGCGGG AGGCAGAGAGCAAAGCTCGGACATTAGAAGTACGCCTAGGTGGAGACCTCACGCGGGACTCCAGGGTGATGTTGC GACAGGTCCAGAACAGAGCCATCACTCTGCGCAGAGAAGCCGATGTCAAGAAGAGGATCAAGGAGGCCAAGCAGC GAGCACTTAAAGAACCTAAGGAACTGAATTTTGTTTTTTGGTGTCAACATTGAACACCGGGATCTGGATGGCATGT TCATCTACAACTGTAGCCGACTGATCAAAATGTATGAGAAAGTGGGCCCACAGCTGGAAGGGGGCATGGCATGTG GCGGGGTTGTTGGGGTTGTTGATGTGCCCTACCTGGTCCTGGAGCCTACACAACAACAACAACAGGACTTTGCTGATG CCAAGGAGTACCGGCACCTGCTCCGAGCAATGGGGGAGCACCTGGCGCAGTATTGGAAGGATATTGCCATCGCCC AGAGGGGAATCATCAAGTTCTGGGATGAGTTTGGCTACCTCTCTGCCAACTGGAACCAGCCCCCGTCCAGTGAGC TGCGTTACAAACGCCGGAGAGCTATGGAAATCCCCACCACCATCCAGTGCGATTTGTGTCTGAAATGGAGAACCC TCCCCTTCCAGCTGAGTTCTGTGGAAAAAGATTACCCTGACACCTGGGTTTGCTCCATGAACCCTGATCCTGAAC AGGACCGGTGTGAGGCTTCTGAACAAAAGCAGAAGGTTCCCCTGGGAACATTCAGAAAGGACATGAAGACGCAGG AAGAGAAGCAGAAACTGACAGAGAAAATTCGCCAGCAGCAGGAGAAGCTGGAGGCCCTTCAGAAAACCACAC CCATCCGCTCCCAAGCAGACCTGAAGAAATTGCCCTTGGAAGTGACCACCAGACCTTCCACTGAGGAACCTGTGC GTAGACCTCAGCGTCCTCGGTCGCCCCTTTACCTGCTGTGATCAGGAACGCCCCCAGCAGACCCCCTTCTTTGC CAACTCCTAGACCAGCCAGCCAGCCCGAAAGGCTCCTGTCATCAGCAGTACCCCAAAGCTCCCTGCTTTGGCAG CCCGGGAGGAGGCCACATCTAGGCTGCTCCAGCCACCTGAGGCACCCCGAAAGCCTGCCAACACTCTCGTCA AGACTGCATCCCGACCTGCCCCTCTGGTGCAGCAACTGTCACCATCTTTACTGCCCAACTCCAAGAGCCCTCGGG AGGTTCCTTCTCCCAAAGTCATCAAGACTCCAGTGGTGAAGAAGACAGAGTCACCCATCAAACTCTCCCCGGCTA GGTGCAAGCGGGGCAGATTTGTTGTGAAGGAGGAAAAGAAGGACTCGAATGAGCTCTCAGACAGTGCTGGGGAAG AGGACTCGGCTGACCTCAAGAGAGCTCAGAAAGATAAAGGGCTGCACGTGGAGGTGCGTGTGAACAGGGAGTGGT

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6506/6881 FIGURE 6005B

MLCFLDDGAGMDPSDAASVIQFGKSAKRTPESTQIGQYGNGLKSGSMRIGKDFILFTKKEDTMTCLFLSRTFHEE EGIDEVIVPLPTWNARTREPVTDNVEKFAIETELIYKYSPFRTEEEVMTQFMKIPGDSGTLVIIFNLKLMDNGEP ELDIISNPRDIQMAETSPEGTKPERRSFRAYAAVLYIDPRMRIFIHGHKVQTKRLSCCLYKPRMYKYTSSRFKTR AEQEVKKAEHVARIAEEKAREAESKARTLEVRLGGDLTRDSRVMLRQVQNRAITLRREADVKKRIKEAKQRALKE PKELNFVFGVNIEHRDLDGMFIYNCSRLIKMYEKVGPQLEGGMACGGVVGVVDVPYLVLEPTHNKQDFADAKEYR HLLRAMGEHLAQYWKDIAIAQRGIIKFWDEFGYLSANWNQPPSSELRYKRRAMEIPTTIQCDLCLKWRTLPFQL SSVEKDYPDTWVCSMNPDPEQDRCEASEQKQKVPLGTFRKDMKTQEEKQKQLTEKIRQQQEKLEALQKTTPIRSQ ADLKKLPLEVTTRPSTEEPVRRPQRPRSPPLPAVIRNAPSRPPSLPTPRPASQPRKAPVISSTPKLPALAAREEA STSRLLQPPEAPRKPANTLVKTASRPAPLVQQLSPSLLPNSKSPREVPSPKVIKTPVVKKTESPIKLSPATPSRK RSVAVSDEEEVEEEAERKERCKRGRFVVKEEKKDSNELSDSAGEEDSADLKRAQKDKGLHVEVRVNREWYTGRV TAVEVGKHVVRWKVKFDYVPTDTTPRDRWVEKGSEDVRLMKPPSPEHQSLDTQQEGGEEEVGPVAQQAIAVAEPS TSECLRIEPDTTALSTNHETIDLLVQILRNCLRYFLPPSFPISKKQLSAMNSDELISFPLKEYFKQYEVGLQNLC NSYQSRADSRAKASEESLRTSERKLRETEEKLQKLRTNIVALLQKVQEDIDINTDDELDAYIEDLITKGD

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HRLEQCEVPEREEQEQQAEVSKPTPTPEGTSQDVTTVTLLLRAPPGSTSSSPASPSSSPTPASPEPPLEPAEAQC
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SVLSPRQPAQNRESTPLASGPSSFQRAGSVRDRVHKFTSDSPMAARLQDGTPQAALSPLTPARLLGPSLTSTTPA
SSSSGSSSRGPSDTSSRFSKEQRGVAQPLAQLRSCPQEEGPRGRGLAARPLENRAGGPVARSEEPGAPLPVAVGT
AEPGGSMKTTFTIEIKDGRGQASTGRVLLPTGNQRAELTLGLRAPPTLLSTSSGGKSTITRVNSPGTLARLGSVT
HVTSFSHAPPSSRGGCSIKMEAEPAEPLAAAVEAANGAEQTRVNKAPEGRSPLSAEELMTIEDEGVLDKMLDQST
DFEERKLIRAALRELRQRKRDQRDKERERRLQEARGRPGEGRGNTATETTTRHSQRAADGSAVSTVTKTERLVHS
NDGTRTARTTTVESSFVRRSENGSGSTMMQTKTFSSSSSSKKMGSIFDREDQASPRAGSLAALEKRQAEKKKELM
KAQSLPKTSASQARKAMIEKLEKEGAAGSPGGPRAAVQRSTSFGVPNANSIKQMLLDWCRAKTRGYEHVDIQNFS
SSWSDGMAFCALVHNFFPEAFDYGQLSPQNRRQNFEVAFSSAETHADCPQLLDTEDMVRLREPDWKCVYTYIQEF
YRCLVQKGLVKTKKS

CCTTAGCTAAGATCGCGGAGATAGAAGCAGAGATGGCTCGGACTCAAAAGAACAAGGCCACAGCACCACTTAG ${\tt GGCTGCTTAAGGCTCGTCTAAGCTTCGTCGAGAACTCATTACTCCAAAGGGTGGTGGTGGAGGTCCAG}$ GAGAAGGTTTTGATGTGGCCAAGACAGGTGATGCTCGAATTGGATTTGTTGGTTTTCCATCTGTGGGGAAGTCAA CACTGCTTAGTAACCTGGCAGGGGTATATTCTGAGGTGGCAGCCTATGAATTCACTACTCTGACCACTGTGCCTG GTGTCATCAGATACAAAGGTGCCAAGATCCAGCTCCTGGATCTCCCAGGTATCATTGAAGGTGCCAAGGATGGGA AAGGTAGAGGTCGTCAAGTCATTGCAGTGGCCCGAACCTGTAACTTGATCTTGATTGTTCTGGATGTCCTGAAAC CTTTGGGACATAAGAAGATAATTGAAAATGAGCTGGAAGGCTTTGGCATTCGCTTGAACAGCAAACCCCCCAACA TTGGCTTTAAGAAGAGGACAAGGGAGGCATTAATCTCACAGCCACTTGCCCCCAGAGTGAGCTGGATGCTGAAA CTGTGAAGAGCATTCTGGCTGAATACAAGATTCATAATGCCGATGTGACTCTACGTAGTGATGCTACAGCTGATG ACCTCATTGATGTGGTGGAAGGAAACAGAGTTTATATCCCCTGTATCTATGTGTTAAATAAGATTGACCAAATCT CCATTGAGGAATTGGATATCATCTATAAGGTGCCTCACTGTGTACCCATCTCTGCCCATCACCGCTGGAATTTTG ATGACCTATTGGAAAAGATCTGGGACTATCTGAAACTAGTGAGAATTTACACCAAACCCAAAGGCCAGTTACCAG ATTACACATCCCCAGTGGTGCTTCCTTACTCCAGGACCACAGTGGAGGATTTCTGCATGAAGATTCACAAAAATC TTATCAAAGAATTTAAATATGCTCTGGTCTGGGGTCTCTCTGTGAAACACAATCCTCAGAAAGTGGGTAAAGACC ATACGTTGGAGGATGAGGATGTCATTCAAATTGTGAAGAAGTGAAACCTTTCCCTTTTCCCATCTGCCGGACGAA AGGGGAGGGAGATGGAGGCACCCAAACTGGAACTTCATTTGTCTTACCTTGGTGTCACCTTGTATGTCGAACTGC ATAAAAGATCTGGTAGGCTGGTCAGCTACATGC

MSSTLAKIAEIEAEMARTQKNKATAHHLGLLKARLAKLRRELITPKGGGGGGPGEGFDVAKTGDARIGFVGFPSV GKSTLLSNLAGVYSEVAAYEFTTLTTVPGVIRYKGAKIQLLDLPGIIEGAKDGKGRGRQVIAVARTCNLILIVLD VLKPLGHKKIIENELEGFGIRLNSKPPNIGFKKKDKGGINLTATCPQSELDAETVKSILAEYKIHNADVTLRSDA TADDLIDVVEGNRVYIPCIYVLNKIDQISIEELDIIYKVPHCVPISAHHRWNFDDLLEKIWDYLKLVRIYTKPKG QLPDYTSPVVLPYSRTTVEDFCMKIHKNLIKEFKYALVWGLSVKHNPQKVGKDHTLEDEDVIQIVKK

CTCTTTTACCAAGGACCCGCCAACATGTGCCGCGTTTGCACCAAAACCGTGAAGAAGGCGGCCCGGGTCATCATA
GAAAAGTACTACACACGCCTGGGCAACGACTTCCACACGAACAAGCGCGTGTGCAAGGAGATCGCCATTATCCCC
AGCAAGAAGCTCCGCAACAAGATAGCAGGCTATGTCACGCATCTGATGAAATGGATTCAGAGAGGCCCAGTAAGA
GGTATCTCCATCAAGCTGCAGGAGGAGGAGAGAAAAGGAGAGACAATTATGTTCCTGAGGTCTCAGCCTTGGAT
CAGGAGATAATTGAAGTAGATCCTGACACTAAGGAAATGCTGAAGCTTTTGGACTTCGGCAGTCTGTCCAACCTG
CAGGTCACTCAGCCTACAGTTGGGATGAACTTCAAAATGCCTCGGGGACCTGTTTGAATTTTTCTGCAGTGCTG
TATTATTTTCAATAAATCTGGCACAACAGC

GCTCTGAGAAGCCGGACTACGCGGCAGCGGCTCTTCAAAGCGGAGCCGGGAGTTTTTGCTACAGTTTTCGCCACC **ATG**AGTCGCAGCTATAATGAGCTGCAGTTCTTGGAGAAGATCAATAAAAACTGCTGGAGGATCAAGAAGGGC TTCGTGCCCAACATGCAGGTTGAAGGTGTTTTCTATGTGAATGATGCTCTGGAGAAATTGATGTTTGAGGAATTA CCTGGAATTGTTCATCGATCTATTGGGCTTCCTGATGTCCATTCAGGATATGGGTTTGCTATTGGGAACATGGCA GCCTTTGATATGAATGACCCTGAAGCAGTAGTATCCCCAGGTGGTGTCGGGTTTGACATCAACTGTGGTGTCCGC TTGCTAAGAACCAATTTAGATGAAAGTGATGTCCAGCCTGTGAAGGAGCAACTTGCCCAAGCTATGTTTGACCAC GTGGACTGGTCCTTAAGAGAAGGGTATGCCTGGGCTGAAGACAAGGAGCACTGCGAGGAGTACGGAAGGATGCTG CAGGCTGACCCCAATAAAGTTTCTGCAAGGGCGAAGAAAAGAGCCTTCCTCAGTTGGGGACCCTGGGAGCAGGC AACCATTATGCAGAAATCCAGGTTGTGGATGAGATTTTCAATGAGTATGCTGCTAAAAAAATGGGCATCGACCAT AAGGGACAGGTGTGTGATGATCCACAGTGGAAGCAGAGGCTTGGGCCACCAAGTAGCCACAGATGCGCTGGTA GCTATGGAGAAGGCCATGAAGAGAGACAAGATTATAGTCAATGATCGGCAGTTGGCTTGTGCTCGAATCGCTTCC CCAGAGGGTCAAGACTATCTGAAGGGAATGGCAGCTGCTGGGAACTATGCCTGGGTCAACCGCTCTTCCATGACC TTCTTAACCCGTCAGGCTTTCGCCAAGGTCTTCAACACACCCCTGATGACTTGGACCTACATGTGATCTATGAT GTTTCTCACAACATTGCCAAAGTGGAGCAGCATGTGGTGGACGGAAAGGAACGGACACTGTTAGTACACAGGAAG GGATCCACCGGGCTTTCCCTCCTCACCATCCCCTCATTGCTGTTGATTACCAACTCACTGGACAGCCAGTGCTC ATTGGTGGCACCATGGGAACCTGTAGTTATGTTCTTACTGGCACTGAACAGGGCATGACTGAGACCTTTGGAACA ACCTGTCATGGAGCGGGCCGTGCATTGTCCCGAGCAAAATCTCGACGTAATTTAGATTTCCAGGATGTCTTAGAC AAATTGGCAGATATGGGAATTGCGATCCGTGTTGCCTCACCCAAACTGGTTATGGAAGAGGCTCCTGAGTCCTAT AAGAATGTGACAGATGTGGTAAATACCTGCCATGATGCTGGAATCAGCAAGAAAGCCATTAAACTGAGACCAATT GCTGTGATCAAAGGA**TAG**AACCTTGGACAGCAGGGCTGCCTGACACCCACCACCCTCTCTGAAGTGGAAGTGGAC TGACATGCTCTTCTGACATCAGACTCAAGGCGGGACAAGTTGCAAAGTGTGCAGCTGTAACTGCTCACGCCAAAA TGGCTGATGGGGAGGCTGCTTTCAGGGGCCCGTGCTTGTAAAATAACCTTCCAGGAAGAGGCACATTGCCCA CCTTTGGAAAGGGAGGAATATGCCTTCTCCTTGGTTGTTCCACAGAGTTTTAGGAAAATCTGTTAGGGATGGGTA GATGTCAAACTGCCTTACGCAGTCATACTGATCTTTAGCCATCAGATTGATCTTCTTCACACCAAGCTCTGTTTA CATTCCGAGAGGTGTCATGAAGAAAGTTCTGTTCAATAAGGTTTTTGGAATGTTTC

MSRSYNDELQFLEKINKNCWRIKKGFVPNMQVEGVFYVNDALEKLMFEELRNACRGGGVGGFLPAMKQIGNVAAL PGIVHRSIGLPDVHSGYGFAIGNMAAFDMNDPEAVVSPGGVGFDINCGVRLLRTNLDESDVQPVKEQLAQAMFDH IPVGVGSKGVIPMNAKDLEEALEMGVDWSLREGYAWAEDKEHCEEYGRMLQADPNKVSARAKKRGLPQLGTLGAG NHYAEIQVVDEIFNEYAAKKMGIDHKGQVCVMIHSGSRGLGHQVATDALVAMEKAMKRDKIIVNDRQLACARIAS PEGQDYLKGMAAAGNYAWVNRSSMTFLTRQAFAKVFNTTPDDLDLHVIYDVSHNIAKVEQHVVDGKERTLLVHRK GSTRAFPPHHPLIAVDYQLIGQPVLIGGTMGTCSYVLTGTEQGMTETFGTTCHGAGRALSRAKSRRNLDFQDVLD KLADMGIAIRVASPKLVMEEAPESYKNVTDVVNTCHDAGISKKAIKLRPIAVIKG

CCCCGAGAGGCCCGGTTCCTTTAGGCCGCCTGCCCGCCTCCAGCTCTCGGGGTCGGCTCTAGGAGGCGCCCTCAG GAGAGGGGGGGGCGCTCTATTCCAGAGACCGAGTGGCAGGGCGGCCACTGTGGCGGGGCTCTTTCCCCGTTTCGC ${\tt CGCCGTCCCCGTCGCCGCTTCCGGGTCCAGGCCCCTCGGGCCGCCTGCCGCCGTC}$ TCTGAAGCGGACCTGGCCGCTGGAGGTGCCCGAGACGGAGCCGACGCTGGGGCATTTGCGCTCGCACCTGAGGCA GTCCCTGCTGTGCACCTGGGGGTACAGTTCTAATACCCGATTTACAATTACATTGAACTACAAGGATCCCCTCAC TGGAGATGAAGAGACCTTGGCTTCATATGGGATTGTTTCTGGGGACTTGATATGTTTGATTCTTCAAGATGACAT TCCAGCGCCTAATATACCTTCATCCACAGATTCAGAGCATTCTTCACTCCAGAATAATGAGCAACCCTCTTTGGC TGTTTGGAATGACGACAGTATGTTAGGGCCTAGTCAAAATTTTGAAGCTGAGTCAATTCAAGATAATGCGCATAT GGCAGAGGGCACAGGTTTCTATCCCTCAGAACCCATGCTCTGTAGTGAATCGGTGGAAGGGCAAGTGCCACATTC ATTAGAGACCTTGTATCAATCAGCTGACTGTTCTGATGCCAATGATGCCTTGATAGTGTTGATACATCTTCTCAT GTTGGAGTCAGGTTACATACCTCAGGGCACCGAAGCCAAAGCACTGTCCATGCCGGAGAAGTGGAAGTTGAGCGG GGTGTATAAGCTGCAGTACATGCATCCTCTCTGCGAGGGCAGCTCCGCTACTCTCACCTGTGTGCCTTTGGGAAA CCTGATTGTTGTAAATGCTACACTAAAAATCAACAATGAGATTAGAAGTGTGAAAAGATTGCAGCTGCTACCAGA ATCTTTTATTTGCAAAGAGAAACTAGGGGAAAATGTAGCCAACATATACAAAGATCTTCAGAAACTCTCTCGCCT CTTTAAAGACCAGCTGGTGTATCCTCTTTTGGCTTTTACCCGACAAGCACTGAACCTACCAGATGTATTTGGGTT GGTTTGTCGTGACCTCTTTACTGCTTCAAATGACCCACTCCTGTGGAGGTTTTTATATCTGCGTGATTTTCGAGA CAATACTGTCAGAGTTCAAGACACAGATTGGAAAGAACTGTACAGGAAGAGGCACATACAAAGAAAAGAATCCCC GAAAGGGCGGTTTGTGATGCTCCTGCCATCGTCAACTCACCCATTCCATTCTATCCCAACCCCTTGCACCCTAG GCCATTTCCTAGCTCCCGCCTTCCTCCAGGAATTATCGGGGGTGAATATGACCAAAGACCAACACTTCCCTATGT TGATCCAGTTGGCCCACTTCCAGGACCTAACCCCATCTTGCCAGGGCGAGGCGGCCCCAATGACAGATTTCCCTT TCCATTTGTTTTTGTTTCTAAACTACAGATGTCAACTCCTTGGGGTGCTGATCTCGAGTGTTATTTTCTGATTGT GGTGTTGAGAGTTGCACTCCCAGAAACCTTTTAAGAGATACATTTATAGCCCTAGGGGTGGTATGACCCAAAGGT TCCTCTGTGACAAGGTTGGCCTTGGGAATAGTTGGCTGCCAATCTCCCTGCTCTTGGTTCTCCTCTAGATTGAAG

MRLRVRLLKRTWPLEVPETEPTLGHLRSHLRQSLLCTWGYSSNTRFTITLNYKDPLTGDEETLASYGIVSGDLIC LILQDDIPAPNIPSSTDSEHSSLQNNEQPSLATSSNQTSIQDEQPSDSFQGQAAQSGVWNDDSMLGPSQNFEAES IQDNAHMAEGTGFYPSEPMLCSESVEGQVPHSLETLYQSADCSDANDALIVLIHLLMLESGYIPQGTEAKALSMP EKWKLSGVYKLQYMHPLCEGSSATLTCVPLGNLIVVNATLKINNEIRSVKRLQLLPESFICKEKLGENVANIYKD LQKLSRLFKDQLVYPLLAFTRQALNLPDVFGLVVLPLELKLRIFRLLDVRSVLSLSAVCRDLFTASNDPLLWRFL YLRDFRDNTVRVQDTDWKELYRKRHIQRKESPKGRFVMLLPSSTHTIPFYPNPLHPRPFPSSRLPPGIIGGEYDQ RPTLPYVGDPISSLIPGPGETPSQFPPLRPRFDPVGPLPGPNPILPGRGGPNDRFPFRPSRGRPTDGRLSFM

6520/6881 FIGURE 6019A

CTTGCCCCAGAGCTGATCCTTGTCTTTGTCCACTTCTCAGCGAGGATGGCACTTCAGGGAGCCCTTCCCTTACTA TCGCAGAGAGAGCAGGCCCTCCCCAGTCATGTCCAACCCAGAACTCTGTTTTGTTTTCTTCATAGCCCTAGCATC ACAGAAAATCACCCTGTGCATTCATGGATGTCCACGGGGGCAAGGGCTTTGTGTTGCTTAACCCAGCATCCTGAA CCGTGTTTGTTGAATGAATACAGAACCCCGTTTGCTCTGGGAGAGCACAGAAAACAGTCTTCTATCATATATCAT TTGGGTCTTTCTCCTCTGTGCCTGCTCTCCCAGAGAAACTGGAGGGGTAGCAGTTAGCATTCCCCCGCTGGTTC GTTAGTTGGTTCTGGTTTGGGTCAGAGACACCCAGTGGCCCAGGTGGGCCGTGGGGCCCAGGGCGCAGACGAGAAGG CCCACGGCGGCATTATTCCCTATAAGGATCTGAACGATCCGGGGGCGCCCCGCCCCGTTACCCCTTGCCCCCGG CGAGGCGGGGTCCCCGGGGGCCCAGCGCTATATCACTCGGCCGCCCAGGCAGCGGCAGAGCGGGCAGCAGCA GGCGGCGGGCGCTCAGACGGCTTCTCCTCCTCTTGCTCCTCCAGCTCCTGCTCCTTCGCCGGGAGGCCGCCC GCCGAGTCCTGCGCCAGCGCCGAGGCAGCCTCGCTGCGCCCCATCCCGTCCCGCCGGGCACTCGGAGGGCAGCGC CACGGCAACTTTGGAGAGGCGAGCAGCAGCCCGGCAGCGGCAGCAGCGGCAATGACCCCTTGGCTCGGGCT CATCGTGCTCCTGGGCAGCTGGAGCCTGGGGGGACTGGGGCGCGAGGCGTGCACATGCTCGCCCAGCCACCCCCA GGACGCCTTCTGCAACTCCGACATCGTGATCCGGGCCAAGGTGGTGGGGAAGAAGCTGGTAAAGGAGGGGCCCTT CGGCACGCTGGTCTACACCATCAAGCAGATGAAGATGTACCGAGGCTTCACCAAGATGCCCCATGTGCAGTACAT CCATACGGAAGCTTCCGAGAGTCTCTGTGGCCTTAAGCTGGAGGTCAACAAGTACCAGTACCTGCTGACAGGTCG CGTCTATGATGGCAAGATGTACACGGGGCTGTGCAACTTCGTGGAGAGGTGGGACCAGCTCACCCTCTCCCAGCG CAAGGGGCTGAACTATCGGTATCACCTGGGTTGTAACTGCAAGATCAAGTCCTGCTACTACCTGCCTTGCTTTGT GACTTCCAAGAACGAGTGTCTCTGGACCGACATGCTCTCCAATTTCGGTTACCCTGGCTACCAGTCCAAACACTA CGCCTGCATCCGGCAGAAGGGCCGCTACTGCAGCTGGTACCGAGGATGGGCCCCCCGGGATAAAAGCATCATCAA AACTCTTCCCAGATGATGACAATGAAATTAGTGCCTGTTTTCTTGCAAATTTAGCACTTGGAACATTTAAAGAAA GGTCTATGCTGTCATATGGGGTTTATTGGGAACTATCCTCCTGGCCCCACCCTGCCCCTTCTTTTTGGTTTTGAC TAATATAATCTCTATTTTTTTAGGAAAACAAAAATGAAAAACTACTCCATTTGAGGATTGTAATTCCCACCCCTC TTGCTTCTTCCCCACCTCACCATCTCCCAGACCCTCTTCCCTTTGCCCTTCTCCTCCAATACATAAAGGACACAG ACAAGGAACTTGCTGAAAGGCCAACCATTTCAGGATCAGTCAAAGGCAGCAGCAGATAGACTCAAGGTGTGTGA TGTGTTGACCAGATGTTCCTGAGTCTGGAGCAAGCACCCAGGCCAGAATAACAGAGCTTTCTTAGTTGGTGAAGA TATGTAAATTGGATAAATACACACCATACACTATCCACAGATATAGCCAAGTAGATTTGGGTAGAGGATACTA TTTCCAGAATAGTGTTTAGCTCACCTAGGGGGATATGTTTGTATACACATTTGCATATACCCACATGGGGACATA AGCTAATTTTTTTACAGGACACAGAATTCTGTTCAATGCTGTTAAATATGCCAATAGTTTAATCTCTTCTATTTT ATTCTGAACACCGTCAGCACCCTCTCTCCCTATCATGGGTCATCTGACCCCTGTCCGTCTCCTTGTCCCTGCTT CATGTTTGGGGGCCTTTCTTTAACTGCCTTCCTGGCTTAGCTCAGATGGCAGATGAGAGTGTAGTCAAGGGCCTG GGCACAGGAGGGAGAGCTGCAGAGTGTCCTGCCTGCCTTGGCTGGAGGGACACCTCTCCTGGGTGTGGAGACAGC TTGGTTCCCTTTCCCTAGCTCCCTGGTGGGTGAATGCCACCTCCTGAGATCCTCACCTCTTGGAATTAAAATTGT AAACTATAATATAAATTCTCCTATTAAATAAAATTATTTTAAGTTTTAGTGTCAAAAGTGAGATGCTGAGAGTAG TCAGCTTATGGGTATTTATCTTCTATTAGTATTTGTATCTTCAGTTCATTCCACTTTAGGAAACAGAGCTGCCAA

6521/6881 FIGURE 6019B

GCAAGGTGCTTGGCAGAACCGCAGAGTGGGAAGAGAGTACCGGCATCGGGTTTCCTTGGGATCAATTTCATTACC GTGTACCTTTCCCATTGTGGTCATGCCATTTGGCAGGGGGAGAATGGGAGGCTTGGCCTTCTTTGTGAGGCAGTG TGAGCAGAAGCTGATGCCAGCATGTCACTGGTTTTGAAGGGATGAGCCCAGACTTGATGTTTTGGGATTGTCCTT TGTCTTCTGTGAGGCATCTGGCCATTCGCACTCCCTGGTGTGGTCAGCCTCTCTCACACAAGGAGGAACTTGG GTGAAGGCTGAGTGTGAGGCACCTGAAGTTTCCCTGCGGAGTCGATAAATTAGCAGAACCACATCCCCATCTGTT AGGCCTTGGTGAGGAGGCCCTGGGCAAAGAAGGGTCTTTCGCAAAGCGATGTCAGAGGGCGGTTTTGAGCTTTCT ATAAGCTATAGCTTTGTTTATTTCACCCGTTCACTTACTGTATAATTTAAAATCATTTATGTAGCTGAGACACTT CTGTATTCAATCATGAACATTTTATTTTGCTAAATCTTGTGTCATGTGTAGGCTGTAATATGTGTACAT TGTGTTTAAGAGAAAAATGAAACCCACATGCCGCCATTTTCCTGAATCAAATTCTGCAGTGGAATGGAGAGGAAA ATACTTCTAGGCAAGCAGCTAGACTGGTGAATTGGGGGAAATAGAAGGAACTAGTAACTGAGACTCCTCCAGCCT CCTCCCTATTGGAATCCCAATGGCTCCTGGAGTAGGAAAAAAGTTTAAACTACATTCATGTTCTTGTTCTGTTCT ACTCGGCCCTGGGTAGTCTACCATTTACTTCACCCCAAGTCCTGCTGCCCATCCAGTTGGGAAGCCATGATTTTC CTAAGAATCCAGGGCCATGGGAGATACAATTCCAAGTTCTCGCTTCCTCTTTGGGCATCTCTTCTGCCTCCCAA GACTCCTGTCTTTTACCCTCCCTCGTTCCAGACCTGCCTCATGGTGGCAACATGGTTCTTGAACAATTAAAGAA ACAAATGACTTTTTGGAATAGCCCTGTCTAGGGCAAACTGTGGCCCCCAGGAGACACTACCCTTCCATGCCCCAG ACCTCTGTCTTGCATGTGACAATTGACAATCTGGACTACCCCAAGATGGCACCCAAGTGTTTGGCTTCTGGCTAC CTAAGGTTAACATGTCACTAGAGTATTTTTATGAGAGACAAACATTATAAAAATCTGATGGCAAAAGCAAAACAA AATGGAAAGTAGGGGAGGTGGATGTGACAACAACTTCCAAATTGGCTCTTTGGAGGCGAGAGGAGGAAACT TGGAGAATAGTTTTTGCTTTGGGGGTAGAGGCTTCTTAGATTCTCCCAGCATCCGCCTTTCCCTTTAGCCAGTCT GCTGTCCTGAAACCCAGAAGTGATGGAGAGAAACCAACAAGAGATCTCGAACCCTGTCTAGAAGGAATGTATTTG GTCTTGTAATGTTGCATAATGTTCACTTTTTATAGTGTGTCCTTTATTCTAAACAGTAAAGTGGTTTTATTTCTA TCAC

TGCACACCCAGGCAGAGAATGCTGAGTTCATGAGGAACTTTCAGAAGGGCCAGGTGACCCGAGACGGCTTCAAGC TGGTGATGGCCTCCCTGTACCACATCTATGTGGCCCTGGAGGAGGAGATTGAGCGCAACAAGGAGAGCCCAGTCT CCCGCTGGCAGGAGGTCATCCCCTACACACCAGCCATGCAGCGCTATGTGAAGCGGCTCCACGAGGTGGGGCGCA ${\tt CAGAGCCCGAGCTGCTGGTGGCCCACGCCTACACCCGCTACCTGGGTGACCTGTCTGGGGGGCCAGGTGCTCAAAA}$ AGATTGCCCAGAAAGCCCTGGACCTGCCCAGCTCTGGCGAGGGCCTGGCCTTCTTCACCTTCCCCAACATTGCCA GTGCCACCAAGTTCAAGCAGCTCTACCGCTCCCGCATGAACTCCCTGGAGATGACTCCCGCAGTCAGGCAGAGGG TGATAGAAGAGGCCAAGACTGCGTTCCTGCTCAACATCCAGCTCTTTGAGGAGTTGCAGGAGCTGCTGACCCATG ACACCAAGGACCAGAGCCCCTCACGGGCACCAGGGCTTCGCCAGCGGGCCAGCAACAAAGTGCAAGATTCTGCCC CCGTGGAGACTCCCAGAGGGAAGCCCCCACTCAACACCCGCTCCCAGGCTCCGCTTCTCCGATGGGTCCTTACAC ${\tt TCAGCTTTCTGGTGGCGACAGTTGCTGTAGGGCTTTATGCCATG} \underline{{\tt TGA}} {\tt ATGCAGGCATGCTGGCTCCCAGGGCCAT}$ AACGAAAAGCACATCCAGGCAATGGCCTAAACTTCAGAGGGGGCGAAGGGGTCAGCCCTGCCCTTCAGCATCCTC AGTTCCTGCAGCAGAGCCTGGAAGACACCCTAATGTGGCAGCTGTCTCAAACCTCCAAAAGCCCTGAGTTTCAAG TATCCTTGTTGACACGGCCATGACCACTTTCCCCGTGGGCCATGGCAATTTTTACACAAACCTGAAAAGATGTTG TGTCTTGTGTTTTTGTCTTATTTTTGTTGGAGCCACTCTGTTCCTGGCTCAGCCTCAAATGCAGTATTTTTGTTG ACTGTGGCCTTGGTCTAACTTTTGTGTGAAATAATAAACAACATTGTCTG

MERPQPDSMPQDLSEALKEATKEVHTQAENAEFMRNFQKGQVTRDGFKLVMASLYHIYVALEEEIERNKESPVFA PVYFPEELHRKAALEQDLAFWYGPRWQEVIPYTPAMQRYVKRLHEVGRTEPELLVAHAYTRYLGDLSGGQVLKKI AQKALDLPSSGEGLAFFTFPNIASATKFKQLYRSRMNSLEMTPAVRQRVIEEAKTAFLLNIQLFEELQELLTHDT KDQSPSRAPGLRQRASNKVQDSAPVETPRGKPPLNTRSQAPLLRWVLTLSFLVATVAVGLYAM

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6524/6881 FIGURE 6022

TTTTCCCGCGAAACTCGGCGGCTGAGCGTGGAGGTTCTTGTCTCCCCTGGTTTGTGAAGTGCGGAAAACCAGAGG CACGGGCTTCACCTTCAAATACAGGGATGAACTCAAGCGGCATTACAACCTGGGGGAGTACTGGATTGAGGTGGA GCTGGAGGAAGCTGCCAAGGAGGTAGCTGATGAGGTGACCCGGCCCCGGCCTTCTGGGGAGGAGGTGCTCCAGGA CATCCAGGTCATGCTCAAGTCGGACGCCAGCCCTTCCAGCATTCGTAGCCTGAAGTCGGACATGATGTCACACCT GGTGAAGATCCCTGGCATCATCATCGCGGCCTCTGCGGTCCGTGCCAAGGCCACCCGCATCTCTATCCAGTGCCG CAGCTGCCGCAACACCCTCACCAACATTGCCATGCGCCCTGGCCTCGAGGGCTATGCCCTGCCCAGGAAGTGCAA CACAGATCAGGCTGGGCGCCCCAAATGCCCATTGGACCCGTACTTCATCATGCCCGACAAATGCAAATGCGTGGA CTTCCAGACCCTGAAGCTGCAGGAGCTGCCTGATGCAGTCCCCCACGGGGAGATGCCCAGACACATGCAGCTCTA GTTTGGCCTGACTACCAGCAGGGGCCGTGACAGGGTGGGCGTGGGCATCCGAAGCTCCTACATCCGTGTCCTGGG CATCCAGGTGGACACAGATGGCTCTGGCCGCAGCTTTGCTGGGGCCGTGAGCCCCCAGGAGGAGGAGGAGTTCCG TCGCCTGGCTGCCCCCAAATGTCTATGAGGTCATCTCCAAGAGCATCGCCCCCTCCATCTTTGGGGGCACAGA CATGAAGAAGGCCATTGCCTGCTCTTTTGGGGGCTCCCGAAAGAGGCTCCCTGATGGACTTACTCGCCGAGG TCCCATTGGGGTATACACGTCTGGGAAAGGCAGCAGCGCAGCTGGACTGACAGCCTCGGTGATGAGGGACCCTTC GTCCCGGAATTTCATCATGGAGGGCGAGCCATGGTCCTGGCCGATGGTGGGGTCGTCTGTATTGACGAGTTTGA GATCACCACCACCCTGAACTCCCGCTGCTCCTGGCTGCTGCCAACTCAGTGTTCGGCCGCTGGGATGAGAC GAAGGGGGAGACAACATTGACTTCATGCCCACCATCTTGTCGCGCTTCGACATGATCTTCATCGTCAAGGATGA GGCTGTGGAGGGCGAGATTGACCTGGCCAAGCTGAAGAAGTTTATTGCCTACTGCCGAGTGAAGTGTGGCCCCCG GCTGTCAGCAGAGGCTGCAGAGAAACTGAAGAACCGCTACATCATCATCAGGGGGCCGGGGGCCCGTCAGCACGAGAG GGACAGTGACCGCCGCTCCAGCATCCCCATCACTGTGCGGCAGCTGGAGGCCATTGTGCGCATCGCGGAAGCCCT CAGCAAGATGAAGCTGCAGCCCTTCGCCACAGAGGCAGATGTGGAGGAGGCCCTGCGGCTCTTCCAAGTGTCCAC CCGCATCGAGAAGCAGCTCAAGCGCCGCTTTGCCATTGGCTCCCAGGTGTCTGAGCACAGCATCATCAAGGACTT CACCAAACAGAAATACCCGGAGCACGCCATCCACAAGGTGCTGCAGCTCATGCTGCGGCGCGGCGAGATCCAGCA $\tt CTCGCCCCTCCTGCCGCTGCCATTGACAATGTTGCTGGGACCTCTGCCTCCCACTGCAGCCCTCGAACTT$ GGTTCTGGGAAGTGTGCTTTTGGCATCCGTTAATAATAAAGCCACGGTGTGTTCAGGT

MSGFDDPGIFYSDSFGGDAQADEGQARKSQLQRRFKEFLRQYRVGTDRTGFTFKYRDELKRHYNLGEYWIEVEME DLASFDEDLADYLYKQPAEHLQLLEEAAKEVADEVTRPRPSGEEVLQDIQVMLKSDASPSSIRSLKSDMMSHLVK IPGIIIAASAVRAKATRISIQCRSCRNTLTNIAMRPGLEGYALPRKCNTDQAGRPKCPLDPYFIMPDKCKCVDFQ TLKLQELPDAVPHGEMPRHMQLYCDRYLCDKVVPGNRVTIMGIYSIKKFGLTTSRGRDRVGVGIRSSYIRVLGIQ VDTDGSGRSFAGAVSPQEEEEFRRLAALPNVYEVISKSIAPSIFGGTDMKKAIACLLFGGSRKRLPDGLTRRGDI NLLMLGDPGTAKSQLLKFVEKCSPIGVYTSGKGSSAAGLTASVMRDPSSRNFIMEGGAMVLADGGVVCIDEFDKM REDDRVAIHEAMEQQTISIAKAGITTTLNSRCSVLAAANSVFGRWDETKGEDNIDFMPTILSRFDMIFIVKDEHN EERDVMLAKHVITLHVSALTQTQAVEGEIDLAKLKKFIAYCRVKCGPRLSAEAAEKLKNRYIIMRSGARQHERDS DRRSSIPITVRQLEAIVRIAEALSKMKLQPFATEADVEEALRLFQVSTLDAALSGTLSGVEGFTSQEDQEMLSRI EKQLKRRFAIGSQVSEHSIIKDFTKQKYPEHAIHKVLQLMLRRGEIQHRMQRKVLYRLK

PCT/US2003/028547

6526/6881 FIGURE 6024

 ${\tt GAGGTGCTGGGGAGCAGCGTGTTTGCTGTGCTTGATTGTGAGCTGCTGGGAAGTTGTGACTTTCATTTTACCTTT}$ CGAATTCCTGGGTATATCTTGGGGGCTGGAGGACGTGTCTGGTTATTATATAGGTGCACAGCTGGAGGTGAGATC ATGGAGGGAGCTGCTTTGCTGAAAATCTTTGTCGTCTGCATCTGGGTGCAGCAAAACCATCCAGGCTGGACAGTG GCTGGACAGTTCCAAGAAAAGAAACGCTTCACTGAAGAAGTCATTGAATACTTCCAGAAGAAAGTTAGCCCAGTG CATCTGAAAATCCTGCTGACTAGCGATGAAGCCTGGAAGAGATTTGTGCGTGTGGCTGAATTGCCCAGGGAAGAG GCAGATGCTCTCTATGAAGCTCTGAAGAATCTTACACCATATGTGGCTATTGAGGACAAAGACATGCAGCAAAAA GAACAGCAGTTTAGGGAGTGGTTTTTGAAAGTTTCCTCAAATCAGATGGAAGATTCAGGAGTCCATAGAAAGGCT TCGTGTCATTGCAAATGAGATTGAAAAGGTCCACAGAGGCTGCGTCATCGCCAATGTGGTGTCTGGCTCCACTGG CATCCTGTCTGTCATTGGCGTTATGTTGGCACCATTTACAGCAGGGCTGAGCCTGAGCATTACTGCAGCTGGGGT AGGGCTGGGAATAGCATCTGCCACGGCTGGGATCGCCTCCAGCATCGTGGAGAACACATACACAAGGTCAGCAGA ACTCACAGCCAGCAGGCTGACCAGCACCAGCACTGACCAATTGGAGGCATTAAGGGACATTCTGCGTGACATCAC ACCCAATGTGCTTTCTTTTGCACTTGATTTTGACGAAGCCACAAAAATGATTGCGAATGATGTCCATACACTCAG GAGATCTAAAGCCACTGTTGGACGCCCTTTGATTGCTTGGCGATATGTACCTATAAATGTTGTTGAGACACTGAG AACACGTGGGGCCCCCACCCGGATAGTGAGAAAAGTAGCCCGGAACCTGGGCAAGGCCACTTCAGGTGTCCTTGT TGTGCTGGATGTAGTCAACCTTGTGCAAGACTCACTGGACTTGCACAAGGGGGCCAAAATCCGAGTCTGCTGAGTC GCTGAGGCAGTGGGCTCAGGAGCTGGAGGAGAATCTCAATGAGCTCACCCATATCCATCAGAGTCTAAAAGCAGG CTAGGCCCAATTGTTGCGGGAAGTCAGGGACCCCAAACGGAGGGACTGGCTGAAGCCATGGCAGAAGAACGTGGA TTGTGAAGATTTCATGGACATTTATTAGTTCCCCAAATTAATACTTTTATAATTTCCTATGCCTGTCTTTACCGC CGTTAACTGCACAAATTGTAGAGCATGTGTGTTTGAACAATATGAAATCTGGGCACCTTGAAAAAAGAACAGGAT AACAGCAATTGTTCAGGGAATAAGAGAGATAACCTTAAACTCTGACCAACAGTGAGCCTGGTGGAACAGAGTCAT ATTTCTCTTCTTCAAAAGCAAATGGGAGAAATATCGCTGAATTCTTTTTCTCAGCAAGGAACATCCCTGAGAAA GAGAATGCACCCTGAGGGTGGGTCTATAAATGGCCTCCTTGGGTGTGGCCATCTTCTATGGTCGAGACTGTAGG GATGAAATAAACCCCAGTCTCCCATAGCGCTCCCAGGCTTATTAGGAAGAGGAAATTCCCGCCTAATAAATTTTG GTCAGACCGGTTGCTCTCAAAACCCTGTCTCCTGATAAGATGTTATCAATGACAATGGTGCCCGAAACCTCATTA GCAATTTTAATTTCTCCCCGGTCCTGTGTTCCTGTGATCTCGCCCTGCCTCCACTTGCCTTGTGATATTCTATTA AATAAAACTTGCTGGTTTTGCGGCTTGTGAGGCATCACGGAACCTACCGATGTGTGATGTCTCCCCTGGACACC TAGCTTTAAAATTTCTCTCTTTTGTACTCTGTGCCTTTATTTCTCAAACCGGCCAACACTTAGGGAAAATAGAAA AGAACCTACGTGACCATCGGGGCAGGTTCCCCGATACCCAATGACCCCAGAGCAGTGCAGCCACCAGGGAAGGTG AGCCAGACACAGGCCGGGACAAAACGCAGACATTTTTTAGGGGAATAAAGAGGGCGAGGTAAAGTTTATGGAACT AGAAGGCAGAATGCTGGGGCCTGGAATAAGGGAGGGAGAGGGGACTGGAGAGTGTGGGGAATGGAAAGAAGCAGT TTACTCTAGACTAAAGAGTATATTGGGGGAGGAAGAGAGGGGGGGCACGTAGGAACAAGCAATGAGAAGACCAGGA AAAGAAAGAGCTGAAAATGGAGAAAGCCACAGTTAGAACTGTTGGATACAGGAGAAGAAACAGCGGCTCCACTAA AGACCCGCCCCCGGTTGGATGTCCTTCCAAGAATGGAATCCTTCCCTGGTGATGGTCTCTCACCCTGTCTTACC AGCATCCACTCTCCCTTGTCCTCCCGGGGGTGTATCTGAGTCAGCCAGTGGCTTCTTGATGATGGTGGTGGTGGT TGTAGTGTGACAGGTCCCCTTTAGGTTATTTAAGGGTGCATGTCCCCTGCTTGAACCCTGAAGGCCGGGTAATGA GCCATTTCCATGGTGCCCAGCTGAGGACCAGGTGTCTCTGAGAATCCAAACATCCTGGAGAGTATCTGAGAACCA ACCAAGTAAAAGTCTCGTTGCTCATATATAGTAGACAAAGAGCCAGAAAATTAACTGAAAAGCAGTTTAGACATT GGGGGAGGCTGGATCTCTCGAGCTGTCTTGCTGAGTGCCCTGTGTGTAAGTCCTAATAAACTTAGCTACTCGCCA WO 2004/030615 PCT/US2003/028547

6527/6881 FIGURE 6025A

ATGGCACAGCAAGCTGCCGATAAGTATCTCTATGTGGATAAAAACTTCATCAACAATCCGCTGGCCCAGGCCGAC GGCGAAGAGGCCATCGTGGAGCTGGTGGAGAATGGGAAGAAGGTGAAGGTGAACAAGGATGACATCCAGAAGATG AACCCGCCCAAGTTCTCCAAGGTGGAGGACATGGCAGAGCTCACGTGCCTCAACGAAGCCTCGGTGCTGCACAAC CTCAAGGAGCGTTACTACTCAGGGCTCATCTACACCTATTCAGGCCTGTTCTGTGTGGTCATCAATCCTTACAAG AACCTGCCCATCTACTCTGAAGAGATTGTGGAAATGTACAAGGGCAAGAAGAGGCACGAGATGCCCCCTCACATC TATGCCATCACAGACACCGCCTACAGGAGTATGATGCAAGACCGAGAAGATCAATCCATCTTGTGCACTGGTGAA TCTGGAGCTGGCAAGACGGAGAACACCAAGAAGGTCATCCAGTATCTGGCGTACGTGGCGTCCTCGCACAAGAGC AAGAAGGACCAGGGCGAGCTGGAGCGGCAGCTGCTGCAGGCCAACCCCATCCTGGAGGCCTTCGGGAACGCCAAG GGAGCCAACATTGAGACTTATCTTTTGGAGAAATCTCGTGCTATCCGCCAAGCCAAGGAAGAACGGACCTTCCAC ATCTTCTATTATCTCCTGTCTGGGGCTGGAGAGCACCTGAAGACCGATCTCCTGTTGGAGCCGTACAACAAATAC CGCTTCCTGTCCAATGGACACGTCACCATCCCCGGGCAGCAGGACAAGGACATGTTCCAGGAGACCATGGAGGCC ATGAGGATTATGGGCATCCCAGAAGAGGGGCCAAATGGGCCTGCTGCGGGTCATCTCAGGGGGTTCTTCAGCTCGGC AACATCGTCTTCAAGAAGGAGCGGAACACTGACCAGGCGTCCATGCCCGACAACACAGCTGCCCAAAAGGTGTCC CATCTCTTGGGTATCAATGTGACCGATTTCACCAGAGGAATCCTCACCCCGCGCATCAAGGTGGGACGGGATTAC GTCCAGAAGGCGCAGACTAAAGAGCAGGCTGACTTTGCCATCGAGGCCTTTGGCCAAGGCGACCTATGAGCGGATG TTCCGCTGGCTGCTGCGCATCAACAAGGCTCTGGACAAGACCAAGAGCCAGGGCGCCTCCTTCATCGGGATC CTGGACATTGCCGGCTTCGAGATCTTTGATCTGAACTCGTTTGAGCAGCTGTGCATCAATTACACCAATGAGAAG CTGCAGCAGCTCTTCAACCACCATGTTCATCCTGGAGCAGGAGGAGTACCAGCGCGAGGGCATCGAGTGGAAC TTCATCGACTTTGGCCTCGACCTGCAGCCCTGCATCGACCTCATTGAGAAGCCAGCAGGCCCCCCGGGCATTCTG GCCCTGCTGGACGAGGAGTGCTGGTTCCCCAAAGCCACCGACAAGAGCTTCGTGGAGAAGGTGATGCAGGAGCAG GGCACCCACCCCAAGTTCCAGAAGCCCAAGCAGCTGAAGGACAAAGCTGATTTCTGCATTATCCACTATGCCGGC AAGGTGGATTACAAAGCTGACGAGTGGCTGATGAAGAACATGGATCCCCTGAATGACAACATCGCCACACTGCTC CACCAGTCCTCTGACAAGTTTGTCTCGGAGCTGTGGAAGGATGTGGACCGCATCATCGGCCTGGACCAGGTGGCC GGCATGTCGGAGACCGCACTGCCCGGGGCCTTCAAGACGCGGAAGGGCATGTTCCGCACTGTGGGGCAGCTTTAC AAGGAGCAGCTGGCCAAGCTGATGGCTACGCTGAGGAACACGAACCCCAACTTTGTCCGCTGCATCATCCCCAAC CACGAGAAGAAGGCCGGCAAGCTGGACCCGCATCTCGTGCTGGACCAGCTGCGCAACGGTGTTCTCGAGGGC ATCCGTATCTGCCGCCAGGGCTTCCCCAACAGGGTGGTCTTCCAGGAGTTTCGGCAGAGATATGAGATCCTGACT AGCAATCTGTACCGCATTGGCCAGAGCAAAGTCTTCTTCCGTGCCGGTGTGCTGGCCCACCTGGAGGAGGAGCGA GACCTGAAGATCACCGACGTCATCATAGGGTTCCAGGCCTGCTGCAGGGGCTACCTGGCCAGGAAAGCATTTGCC AAGCGGCAGCAGCAGCTTACCGCCATGAAGGTCCTCCAGCGGAACTGCGCTGCCTACCTGAAGCTGCGGAACTGG CAGTGGTGGCGGCTCTTCACCAAGGTCAAGCCGCTGCTGCAGGTGAGCCGGCAGGAGGAGGAGATGATGGCCAAG TCTCAGCTCATGGCAGAGAAATTGCAGCTGCAGGAGCAGCTCCAGGCAGAAACCGAGCTGTGTGCCGAGGCTGAG GAGCTCCGGGCCCGCCTGACCGCCAAGAAGCAGGAATTAGAAGAGATCTGCCATGACCTAGAGGCCAGGGTGGAG GAGGAGGAGGAGCGCTGCCAGCACCTGCAGGCGGAGAAGAAGAAGATGCAGCAGAACATCCAGGAGCTTGAGGAG CAGCTGGAGGAGGAGGAGAGCCCCCGGCAGAAGCTGCAGCTGGAGAAGGTGACCACCGAGGCGAAGCTGAAAAAG CTGGAGGAGGAGCAGATCATCCTGGAGGACCAGAACTGCAAGCTGGCCAAGGAAAAGAAACTGCTGGAAGACAGA ATAGCTGAGTTCACCACCAACCTCACAGAAGAGGAGGAGAAATCTAAGAGCCTCGCCAAGCTCAAGAACAAGCAT GAGGCAATGATCACTGACTTGGAAGAGCGCCTCCGCAGGGAGGAGAAGCAGCGACAGGAGCTGGAGAAGACCCGC CGGAAGCTGGAGGGAGACTCCACAGACCTCAGCGACCAGATCGCCGAGCTCCAGGCCCAGATCGCGGAGCTCAAG ATGCAGCTGGCCAAGAAAGAGGAGGAGCTCCAGGCCGCCCTGGCCAGAGTGGAAGAGGAAGCTGCCCAGAAGAAC ATGGCCCTCAAGAAGATCCGGGAGCTGGAATCTCAGATCTCTGAACTCCAGGAAGACCTGGAGTCTGAGCGTGCT TCCAGGAATAAAGCTGAGAAGCAGAAACGGGACCTTGGGGAAGAGCTAGAGGCTCTGAAAACAGAGTTGGAGGAC ACGCTGGATTCCACAGCTGCCCAGCAGGAGCTCAGGTCAAAACGTGAGCAGGAGGTGAACATCCTGAAGAAGACC CTGGAGGAGGAGGCCAAGACCCACGAGGCCCAGATCCAGGAGATGAGGCAGAAGCACTCACAGGCCGTGGAGGAG

6528/6881 FIGURE 6025B

CTGGCGGAGCAGCTGGAGCAGACGAAGCGGTGAAAGCAAACCTCGAGAAGGCAAAGCAGACTCTGGAGAACGAG CGGGGGGAGCTGGCCAACGAGGTGAAGGTGCTGCTGCAGGGCAAAGGGGACTCGGAGCACAAGCGCAAGAAAGTG GAGGCGCAGCTGCAGGAGCTGCAGGTCAAGTTCAACGAGGGAGAGCGCGTGCGCACAGAGCTGGCCGACAAGGTC ACCAAGCTGCAGGTGGAGCTGGACAACGTGACCGGGCTTCTCAGCCAGTCCGACAAGTCCAGCAAGCTCACC AAGGACTTCTCCGCGCTGGAGTCCCAGCTGCAGGACACTCAGGAGCTGCTGCAGGAGGAGAACCGGCAGAAGCTG GCCAAGCACAACCTGGAGAAGCAGATCGCCACCCTCCATGCCCAGGTGGCCGACATGAAAAAAGAAGATGGAGGAC AGTGTGGGGTGCCTGGAAACTGCTGAGGAGGTGAAGAGGAAGCTCCAGAAGGACCTGGAGGGCCTGAGCCAGCGG CACGAGGAGAAGGTGGCCGCCTACGACAAGCTGGAGAAGACCAAGACGCGGCTGCAGCAGGAGCTGGACGACCTG CTGGTGGACCTGGACCACCAGCGCCAGAGCGCGTGCAACCTGGAGAAGAAGCAGAAGAAGTTTGACCAGCTCCTG GCGGAGGAGAAGACCATCTCTGCCAAGTATGCAGAGGAGCGCGACCGGGCTGAGGCGGAGGCCCGAGAGAAGGAG ACCAAGGCTCTGTCGCTGGCCCGGGCCCTGGAGGAAGCCATGGAGCAGAAGGCGGAGCTGGAGCGGCTCAACAAG CAGTTCCGCACGGAGATGGAGGACCTTATGAGCTCCAAGGATGATGTGGGCAAGAGTGTCCACGAGCTGGAGAAG TCCAAGCGGGCCCTAGAGCAGCAGGTGGAGGAGATGAAGACGCAGCTGGAAGAGCTGGAGGACGAGCTGCAGGCC ACCGAAGATGCCAAGCTGCGGTTGGAGGTCAACCTGCAGGCCATGAAGGCCCAGTTCGAGCGGGACCTGCAGGGC GAGAGGAAGCAGCGCTCGATGGCAGTGGCCGCCCGGAAGAAGCTGGAGATGGACCTGAAGGACCTGGAGGCGCAC ATCGACTCGGCCAACAAGAACCGGGACGAAGCCATCAAACAGCTGCGGAAGCTGCAGGCCCAGATGAAGGACTGC ATGCGCGAGCTGGATGACACCCGCGCCTCTCGTGAGGAGATCCTGGCCCAGGCCAAAGAGAACGAGAAGAAGCTG AAGAGCATGGAGGCCGAGATGATCCAGTTGCAGGAGGAACTGGCAGCCGCGGAGCGTGCCAAGCGCCAGGCCCAG CAGGAGCGGGATGAGCTGGCTGACGAGATCGCCAACAGCAGCGGCAAAGGAGCCCTGGCGTTAGAGGAGAAGCGG CGTCTGGAGGCCCGCATCGCCCAGCTGGAGGAGGAGCTGGAGGAGGAGCAGGCAACACGGAGCTGATCAACGAC CGGCTGAAGAAGGCCAACCTGCAGATCGACCAGATCAACACCGACCTGAACCTGGAGCGCAGCCACGCCCAGAAG AACGAGAATGCTCGGCAGCAGCTGGAACGCCAGAACAAGGAGCTTAAGGTCAAGCTGCAGGAGATGGAGGGCACT GTCAAGTCCAAGTACAAGGCCTCCATCACCGCCCTCGAGGCCAAGATTGCACAGCTGGAGGAGCAGCTGGACAAC GAGACCAAGGAGCGCCAGGCAGCCTGCAAACAGGTGCGTCGGACCGAGAAGAAGCTGAAGGATGTGCTGCTGCAG GTGGATGACGAGCGGAGGAACGCCGAGCAGTACAAGGACCAGGCCGACAAGGCATCTACCCGCCTGAAGCAGCTC AAGCGGCAGCTGGAGGAGGCCGAAGAGGGCCCAGCGGGCCAACGCCTCCCGCCGGAAACTGCAGCGCGAGCTG GAGGACGCCACTGAGACGGCCGATGCCATGAACCGCGAAGTCAGCTCCCTAAAGAACAAGCTCAGGCGCGGGGAC CTGCCGTTTGTCGTGCCCCGCAATGGCCCGGAAAGGCGCCGGGGATGGCTCCGACGAAGAGGTAGATGGCAAA GCGGATGGGGCTGAGGCCAAACCTGCCGAA<u>TAA</u>

MAQQAADKYLYVDKNFINNPLAQADWAAKKLVWVPSDKSGFEPASLKEEVGEEAIVELVENGKKVKVNKDDIQKM NPPKFSKVEDMAELTCLNEASVLHNLKERYYSGLIYTYSGLFCVVINPYKNLPIYSEEIVEMYKGKKRHEMPPHI YAITDTAYRSMMQDREDQSILCTGESGAGKTENTKKVIQYLAYVASSHKSKKDQGELERQLLQANPILEAFGNAK TVKNDNSSRFGKFIRINFDVNGYIVGANIETYLLEKSRAIRQAKEERTFHIFYYLLSGAGEHLKTDLLLEPYNKY ${ t RFLSNGHVTIPGQQDKDMFQETMEAMRIMGIPEEEQMGLLRVISGVLQLGNIVFKKERNTDQASMPDNTAAQKVS}$ HLLGINVTDFTRGILTPRIKVGRDYVQKAQTKEQADFAIEALAKATYERMFRWLVLRINKALDKTKRQGASFIGI LDIAGFEIFDLNSFEQLCINYTNEKLQQLFNHTMFILEQEEYQREGIEWNFIDFGLDLQPCIDLIEKPAGPPGIL ALLDEECWFPKATDKSFVEKVMQEQGTHPKFQKPKQLKDKADFCIIHYAGKVDYKADEWLMKNMDPLNDNIATLL HOSSDKFYSELWKDVDRIIGLDQVAGMSETALPGAFKTRKGMFRTVGQLYKEQLAKLMATLRNTNPNFVRCIIPN HEKKAGKLDPHLVLDQLRCNGVLEGIRICRQGFPNRVVFQEFRQRYEILTPNSIPKGFMDGKQACVLMIKALELD SNLYRIGQSKVFFRAGVLAHLEEERDLKITDVIIGFQACCRGYLARKAFAKRQQQLTAMKVLQRNCAAYLKLRNW QWWRLFTKVKPLLQVSRQEEEMMAKEEELVKVREKQLAAENRLTEMETLQSQLMAEKLQLQEQLQAETELCAEAE ELRARLTAKKOELEEICHDLEARVEEEEERCQHLQAEKKKMQQNIQELEEQLEEEESARQKLQLEKVTTEAKLKK LEEEQIILEDQNCKLAKEKKLLEDRIAEFTTNLTEEEEKSKSLAKLKNKHEAMITDLEERLRREEKQRQELEKTR RKLEGDSTDLSDQIAELQAQIAELKMQLAKKEEELQAALARVEEEAAQKNMALKKIRELESQISELQEDLESERA SRNKAEKQKRDLGEELEALKTELEDTLDSTAAQQELRSKREQEVNILKKTLEEEAKTHEAQIQEMRQKHSQAVEE LAEQLEQTKRVKANLEKAKQTLENERGELANEVKVLLQGKGDSEHKRKKVEAQLQELQVKFNEGERVRTELADKV TKLQVELDNVTGLLSQSDSKSSKLTKDFSALESQLQDTQELLQEENRQKLSLSTKLKQVEDEKNSFREQLEEEEE AKHNLEKQIATLHAQVADMKKKMEDSVGCLETAEEVKRKLQKDLEGLSQRHEEKVAAYDKLEKTKTRLQQELDDL LVDLDHQRQSACNLEKKQKKFDQLLAEEKTISAKYAEERDRAEAEAREKETKALSLARALEEAMEQKAELERLNK QFRTEMEDLMSSKDDVGKSVHELEKSKRALEQQVEEMKTQLEELEDELQATEDAKLRLEVNLQAMKAQFERDLQG RDEOSEEKKKOLVROVREMEAELEDERKORSMAVAARKKLEMDLKDLEAHIDSANKNRDEAIKQLRKLQAQMKDC MRELDDTRASREEILAQAKENEKKLKSMEAEMIQLQEELAAAERAKRQAQQERDELADEIANSSGKGALALEEKR $\verb|RLEARIAQLEEELEEEQGNTELIND| RLKANLQIDQINTDLNLERSHAQKNENARQQLERQNKELKVKLQEMEGT|$ VKSKYKASITALEAKIAQLEEQLDNETKERQAACKQVRRTEKKLKDVLLQVDDERRNAEQYKDQADKASTRLKQL KROLEEAEEEAORANASRRKLQRELEDATETADAMNREVSSLKNKLRRGDLPFVVPRRMARKGAGDGSDEEVDGK ADGAEAKPAE

GAGCAGTTTCGGGATATGCCCTACCAGCCGTTCAGCAAAGGAGCTCGGCTAGGAAAGGTTGCAGACTGGACAGGA GCCACATACCAAGATAAGAGGTACACAAATAAGTACTCCTCTCAGTTTGGTGGTGGAAGTCAATATGCTTATTTC CATGAGGAGGATGAAAGTAGCTTCCAGCTGGTGGATACAGCGCGCACACAGAAGACGGCCTACCAGCGGAATCGA ATGAGATTTGCCCAGAGGAACCTCCGCAGAGACAAAGATCGTCGGAACATGTTGCAGTTCAACCTGCAGATCCTG CCTAAGAGTGCCAAACAGAAAGAGAGAGAACGCATTCGACTGCAGAAAAAGTTCCAGAAACAATTTGGGGTTAGG CAGAAATGGGATCAGAAATCACAGAAACCCCGAGACTCTTCAGTTGAAGTTCGTAGTGATTGGGAAGTGAAAGAG GAAATGGATTTTCCTCAGTTGATGAAGATGCGCTACTTGGAAGTATCAGAGCCACAGGACATTGAGTGTTGTGGG GCCCTAGAATACTACGACAAAGCCTTTGACCGCATCACCACGAGGAGTGAGAAGCCACTGCGGAGCATCAAGCGC ATCTTCCACACTGTCACCACCACAGACGACCCTGTCATCCGCAAGCTGGCAAAAACTCAGGGGAATGTGTTTGCC ACTGATGCCATCCTGGCCACGCTGATGAGCTGTACCCGCTCAGTGTATTCCTGGGATATTGTCGTCCAGAGAGTT CCCCCTCAAGATGAAGGTAATTCCTTCAATTCACCCCGCAACCTGGCCATGGAGGCAACCTACATCAACCACAAT TTCTCCCAGCAGTGCTTGAGAATGGGGAAGGAAAGATACAACTTCCCCAACCCAAACCCGTTTGTGGAGGACGAC ATGGATAAGAATGAAATCGCCTCTGTTGCGTACCGTTACCGCAGGTGGAAGCTTGGAGATGATATTGACCTTATT $\tt GTCCGTTGTGAGCACGATGGCGTCATGACTGGAGCCAACGGGGAAGTGTCCTTCATCAACATCAAGACACTCAAT$ GAGTGGGATTCCAGGCACTGTAATGGCGTTGACTGGCGTCAGAAGCTGGACTCTCAGCGAGGGGCTGTCATTGCC AAGCTTGGTTATGTGTCTCGGTACCACGTGAAAGACTCCTCACGCCACGTCATCCTAGGCACCCAGCAGTTCAAG CCTAATGAGTTTGCCAGCCAGATCAACCTGAGCGTGGAGAATGCCTGGGGCATTTTACGCTGCGTCATTGACATC TGCATGAAGCTGGAGGAGGGCAAATACCTCATCCTCAAGGACCCCAACAAGCAGGTCATCCGTGTCTACAGCCTC ${\tt ACT} \underline{{\tt TAA}} {\tt ACCAGTGATGTGGAGCTGGAGTTTGTCCTTCCACCGAGACTACGAGGCCCTTTGATGCTTAGTGGAATG}$ AAAAAA

MAKFMTPVIQDNPSGWGPCAVPEQFRDMPYQPFSKGDRLGKVADWTGATYQDKRYTNKYSSQFGGSQYAYFHEE DESSFQLVDTARTQKTAYQRNRMRFAQRNLRRDKDRRNMLQFNLQILPKSAKQKERERIRLQKKFQKQFGVRQKW DQKSQKPRDSSVEVRSDWEVKEEMDFPQLMKMRYLEVSEPQDIECCGALEYYDKAFDRITTRSEKPLRSIKRIFH TVTTTDDPVIRKLAKTQGNVFATDAILATLMSCTRSVYSWDIVVQRVGSKLFFDKRDNSDFDLLTVSETANEPPQ DEGNSFNSPRNLAMEATYINHNFSQQCLRMGKERYNFPNPNPFVEDDMDKNEIASVAYRYRWKLGDDIDLIVRC EHDGVMTGANGEVSFINIKTLNEWDSRHCNGVDWRQKLDSQRGAVIATELKNNSYKLARWTCCALLAGSEYLKLG YVSRYHVKDSSRHVILGTQQFKPNEFASQINLSVENAWGILRCVIDICMKLEEGKYLILKDPNKQVIRVYSLPDG TFSSDEDEEEEEEEEEEE

AGCCGGGAGTCCGAGACCCGGGCCCGCAGCCCGAGTGTCGCCGCCA<u>TTC</u>GCTTCGCCGCAGCTCTGCCGCGCGCTG TGGTACCTGCCGAAGCTGGGGCGCGACGCGACGCGAGTTCGAGGAGCGCCACATCCCGGGCGCCGCTTTCTTC GACATCGACCAGTGCAGCGACCGCACCTCGCCCTACGACCACATGCTGCCCGGGGCCGAGCATTTCGCGGAGTAC GCAGGCCGCCTGGGCGTGGGCGCCACCCACGTCGTGATCTACGACGCCAGCGACCAGGGCCTCTACTCCGCC $\tt CCGCGCGTCTGGTGGATGTTCCGCCGCCTTCGGCCACCACGCCGTGTCACTGCTTGATGGCGGCCTCCGCCACTGG$ CTGCGCCAGAACCTCCCGCTCAGCTCCGGCAAGAGCCAACCTGCTCCCGCCGAGTTCCGCGCTCAGCTCGACCCC GCCTTCATCAAGACCTACGAGGACATCAAGGAGAACCTGGAATCCCGGCGCTTCCAGGTGGTGGACTCCCGAGCC ACTGGCAGGTTCCGCGGCACCGAGCCCCGAGCCCCGAGACGGCATTGAACCTGGCCACATCCCAGGTACCGTGAAC ATCCCCTTCACAGACTTCCTGAGCCAGGAGGGGCTGGAGAAGAGCCCTGAGGAGATCCGCCATCTGTTCCAGGAG AAGAAAGTGGACCTGTCTAAGCCACTGGTGGCCACGTGTGGCTCTGGCGTCACAGCCTGCCACGTGGCACTAGGG GCCTACCTCTGCGGCAAGCCAGACGTGCCCATCTACGATGGCTCCTGGGTGGAGTGGTACATGCGCGCCCGGCCC GAGGATGTCATCTCAGAGGGCCGGGGGAAGACCCACTGAAGCTGGGCAGGACACAGGCGAGCTCAGGTGATGCCG GCCACCAGCAATGCCTGGCCTGGTAGCTCCGCTTCTGCTTTCACCAAGAGAGTGTTTCTTCACTCAACTCAGGTG GAGGCGAGCCCTGGAGGAGGGGAGGCCACAACTCCGAGCTGCCCACCTGGTGCTGAGCTGGGGCCCCGCCTCCTTT

MASPQLCRALVSAQWVAEALRAPRAGQPLQLLDASWYLPKLGRDARREFEERHIPGAAFFDIDQCSDRTSPYDHM LPGAEHFAEYAGRLGVGAATHVVIYDASDQGLYSAPRVWWMFRAFGHHAVSLLDGGLRHWLRQNLPLSSGKSQPA PAEFRAQLDPAFIKTYEDIKENLESRRFQVVDSRATGRFRGTEPEPRDGIEPGHIPGTVNIPFTDFLSQEGLEKS PEEIRHLFQEKKVDLSKPLVATCGSGVTACHVALGAYLCGKPDVPIYDGSWVEWYMRARPEDVISEGRGKTH

GCGACTCTCCCGGGCTGCCAGCCGGGACGCGGCCGCCGCCGCTGCAGACGACGAGTCCGCCCTCGTCCCGCGC GCTTGAACATCTATAGCTGCTTCTGAGGGGCCTGGGAGCCCCTGGGAGAGACGAGCCATGAACCCCCCACA GCCTCTGCATTTGGGGACCTCACCTTAGGAGAGTGCCATTTACAGCTTCCGCCAGGGCAAAGGAGCTGAGCAGCC ATCCCAAGCCCAGCCCACCTCCCCCGGCCCCTGGTAGGCATGGACTAGCAGCTGTGAGCAGCCAGAGCTGA TGCCCGGCCCCAGGGGGGCAGAGGCGCCGCCACCATGAGCCTGGGCAAGCTCTCGCCTGTGGGCTGTCCA TGGGCCGTGGCGGGATGTCTTCGGGGACACGTCCTTCCTCAGCAACCACGGTGGCAGCTCCGGGAGCACCCATC GCTCACCCCGCAGCTTCCTGGCCAAGAAGCTGCAGCTGGTGCGGAGGGTGGGGGCGCCCCCCGGAGGATGGCAT CTCCCCTGCACCCTCCCCGGCTCCACCGGCCATCTCCCCCATCATCAAGAACGCCATCTCCCTGCCCCAGCTCA ACTCCAGCTACGGCCTGGACTCTGGGTTCTGCACCATCTCCCGCCTGGCCCCGCTCGGAAAAGCCGCATGACCGAG ACCGGGATGGTTCCTTCCCCTCTGAGCCCGGGCTTCGCCGCTCTGACTCTCTTGTCCTTCCGCCTGGACCTCG ACCTTGGGCCCTCACTCCTCAGCGAGCTGCTAGGGGTCATGAGCCTCCCAGAAGCCCCTGCAGCTGAGACTCCAG CCCCGCTGCAAACCCCCAGCCCCTACTGCAAACCCCACGGGTCCTGCTGCAAACCCCCCAGCCACTACTGCAA ACCCCCAGCGCCTGCTGCAAACCCCTCAGCACCTGCCGCAACCCCCACGGGTCCTGCTGCAAATCCCCCAGCCC CTGCCGCAAGCTCCACACCCCATGGACACTGTCCCAATGGGGTAACAGCTGGGTTGGGCCCAGTGGCTGAGGTGA ACACCTTTGAATTTGCGGATGCTGAGGAGGATGATGAGGTCAAGGTGTGAGGGGCTGGGGCACGGTCCCAGGGCC TTATGCTCCCAGAGGCCCTGCCAAACTGACCACCTCCCCGACTGCCACTCTGGACCTAATAGCTGTTCCTTAGG CCCCACTCCATGCCACCCCCACCAGCTGGAGGACCCAGCCTCACAGTGTGTCCTTTGTGCCAGACCAAGCGGCCC GTGGGGGTGGGGGGCAGGGAGTGTACCACACAGGGCCATTGTCTCACCTCCCAAAGGGACCGCCTGCCCCAGC TCATCCCAGAGCGTCCCTGCTGCAACCCTGACAGCCGTCTCCCAGGCCGCTTCCCCAACATCCCCGCCCCAGCCT CTGGGGCCTGATTAAATAAGGCTGTTTTGAT

GGGGGCCGGTGGCGG<u>ATG</u>GAGCCCGCGATGGAGCCGGAGACTCTGGAGGCGCGAATCAATAGAGCCACGAACCCC CTGAACAAGGAGCTCGACTGGGCCAGCATCAACGGCTTCTGCGAGCAGCTCAACGAGGACTTTGAGGGGCCTCCA etcgccaccggctgctgcccacaagatccagtccccacaggagtgggaggcgatccaggccttgacggtgctg GAAACATGCATGAAGAGCTGCGGCAAGCGGTTCCACGACGAAGTGGGCAAGTTCCGCTTTCTCAACGAGCTCATC AAGGTCGTGTCTCCCAAGTATCTGGGCTCTCGGACATCGGAGAAGGTGAAGAACAAGATCTTGGAGCTCCTCTAC AGCTGGACAGTGGGCCTGCCCGAGGAGGTGAAAATCGCAGAGGCCTACCAGATGCTAAAGAAGCAGGGGATTGTA AAGTCCGACCCCAAGCTTCCAGATGACACTACCTTTCCCCTTCCTCCACGGCCGAAGAATGTGATCTTTGAA GATGAGGAGAAATCCAAGATGCTGGCCCGCCTGCTGAAGAGCTCCCATCCCGAAGACCTCCGCGCAGCCAATAAG CTCATCAAAGAGATGGTGCAGGAGGACCAGAAGCGGATGGAGAAGATCTCGAAGAGGGTGAATGCCATCGAGGAG GTGAACAACAATGTGAAACTGCTCACGGAGATGGTGATGAGCCACAGCCAGGGCGGCGCAGCAGCTGGCAGCAGC GAGGACCTCATGAAGGAACTGTACCAGCGCTGTGAGCGGATGCGGCCCACGCTCTTCCGACTGGCGAGTGACACA GAGGACAATGATGAGGCCTTAGCGGAGATCCTGCAGGCCAATGACAACCTCACCCAGGTGATCAACCTGTATAAG CAGCTGGTGCGGGGTGAGGAGGTCAACGGTGATGCCACAGCCGGCTCCATCCCTGGGAGCACCTCGGCCCTGCTG GATCTCTCAGGCCTGGATCTCCCGCCTGCGGGCACCACCTACCCAGCTATGCCCACCCGCCCTGGCGAGCAGGCC AGCCCTGAGCAGCCCAGTGCCTCAGTTTCCCTGCTTGACGACGAGCTCATGTCTCTGGGGCCTCAGTGACCCCACA $\tt CCCCCTTCAGGCCCAAGCCTGGATGGTACCGGATGGAACAGCTTCCAGTCGTCGGATGCCACTGAGCCCCCAGCC$ GACGACCTAGACCTCCTGGGGAAGACCCTCCTGCAGCAGTCGCTGCCCCCGGAATCCCAGCAAGTGCGGTGGGAG AAGCAGCCAACCCCCGGCTCACACTCCGGGACCTGCAGAATAAGAGCAGCAGCTGCAGCTCCCCAGCTCC AGCGCCACCAGCCTTCTCCACACCGTGTCCCCAGAGCCCCCCAGGCCTCCGCAGCAGCCCGTACCAACCGAGCTC TCACTGGCCAGCATCACTGTGCCCCTGGAGTCCATCAAACCCAGCAACATCCTGCCCGTGACTGTGTATGACCAG CACGGCTTCCGCATCCTCTTCCATTTTGCCCGGGACCCACTGCCAGGGCGCTCCGACGTGCTGGTGGTGGTTGTT TCCATGCTGAGCACCGCCCCCAGCCCATCCGCAACATCGTGTTCCAGTCAGCTGTCCCCAAGGTTATGAAGGTG AAGCTGCAGCCACCCTCGGGCACGGAGCTGCCAGCTTTTAACCCCATCGTCCACCCCTCAGCAATCACCCAGGTC CTGCTGCTTGCCAACCCCCAGAAGGAGAAGGTTCGCCTCCGCTACAAGCTCACCTTCACCATGGGTGACCAGACC TACAACGAGATGGGGGATGTGGACCAGTTCCCCCCACCTGAAACCTGGGGTAGCCTC<u>TAG</u>AACAGAGGGGCTGGG CCCATGGCCATTCACCCCCAGGCCTGGTGCTTCTCCCCACACCCCTGTAGGCCTCAAGTGACTCTTCCCCCTCCT GCTCCGGCCCCGCCCCTGCTGAGCCAAACCCAGTAGGAGGCTGGGCCTGGGTTTGTGCCGCTGGGGTCTCCATCA CCGGGACCTGGAGAGGGAGGGGCTGTGTAGCCTTGGAAGAACTTGGGTCATGGGGAGGAAGCACAGCTGTTGGGG AAGGGCCAGGACCTCAGGCCCAGCCCCAACCCCAGCTGGGGTGGGGTCTTCCCCACCTGTCTCTTATGCCTTATG GGAAGGCCCAGCCATAACTCGGGGGCCATGCTGGAGCTGGGGGACCAGCTTAGGCCTCCTCCATAGGAACCCAGTG GCCCTGTGGTCACAGCCTCAGGGGGCCAGGCTGGGGGAACCTCACCTGGCCCGTACTCCTGGGGGTTTCCCTTTG CCATTGGGCCCCTGAGGGACTGTGGGGGCTCAAGGGTAATGCCAGAGGCCCATGGCCCCAGCGAGGGGCTGTGG GGCACCTAGAGTTCTCGGTGTGTCTCCTTCATTCATTGGCCTCTGCTGGGGCCTCCTATGGGTGTCTTACGTCTG CGTTTTTCCTGGAAAAAAAAAAAAAA

MEPAMEPETLEARINRATNPLNKELDWASINGFCEQLNEDFEGPPLATRLLAHKIQSPQEWEAIQALTVLETCMK SCGKRFHDEVGKFRFLNELIKVVSPKYLGSRTSEKVKNKILELLYSWTVGLPEEVKIAEAYQMLKKQGIVKSDPK LPDDTTFPLPPPRPKNVIFEDEEKSKMLARLLKSSHPEDLRAANKLIKEMVQEDQKRMEKISKRVNAIEEVNNNV KLLTEMVMSHSQGGAAAGSSEDLMKELYQRCERMRPTLFRLASDTEDNDEALAEILQANDNLTQVINLYKQLVRG EEVNGDATAGSIPGSTSALLDLSGLDLPPAGTTYPAMPTRPGEQASPEQPSASVSLLDDELMSLGLSDPTPPSGP SLDGTGWNSFQSSDATEPPAPALAQAPSMESRPPAQTSLPASSGLDDLDLLGKTLLQQSLPPESQQVRWEKQQPT PRLTLRDLQNKSSSCSSPSSSATSLLHTVSPEPPRPPQQPVPTELSLASITVPLESIKPSNILPVTVYDQHGFRI LFHFARDPLPGRSDVLVVVVSMLSTAPQPIRNIVFQSAVPKVMKVKLQPPSGTELPAFNPIVHPSAITQVLLLAN PQKEKVRLRYKLTFTMGDQTYNEMGDVDQFPPPETWGSL

CTGCAGGTAGAACAGCGGCTGGAGCCGGCCAAGCGGCCACAACATCCACAAGCGGCTGCAGGCCTGTCTG CAGGGCCAGAGCGGGCAGACATGGACAAGCGGGTGAAGAAGCTTCCCCTCATGGCTCTGTCCACCACG<u>ATG</u>GCT GAGAGCTTCAAGGAGCTGGACCCTGATTCCAGCATGGGGAAGGCCTTGGAGATGAGCTGTGCCATCCAGAATCAG GAGGAGCTGCCAGCCATCCTCAAACACAAGAAAAGCCTCCAGAAGCTCGTGTCCGACTGGAACACACTCAAGAGC AGGCTCAGTCAGGCAACCAAGAATTCAGGCAGCAGTCAAGGCCTAGGAGGCAGCCCGGGTAGTCACAGCCATACG ACCATGGCCAACAAGGTGGAGACGCTGAAGGAGGAGGAGGAGGAGCTGAAGAGGAAAGTGGAGCAATGCAGGGAC GAGTACTTGGCTGACCTGTACCACTTTGTTACCAAGGAGGACTCCTATGCCAACTACTTCATTCGTCTCCTGGAG ATTCAGGCCGATTACCATCGCAGGTCACTGAGCTCGCTGGACACAGCCCTGGCTGAGCTGAGGGAGAACCACGGC CAAGCAGACCACTCCCCTTCGATGACAGCCACCCACTTCCCCAGGGTGTATGGGGTGTCGCTGGCAACCCACCTG CAAGAGCTGGGCCGGGAGATTGCCCTGCCCATCGAGGCCTGCGTCATGATGCTGCTTTCTGAGGGCATGAAGGAA GAGGGTCTCTTCCGTCTGGCTGCTGGGGCCTCGGTGCTGAAGCGTCTCAAGCAGACAATGGCCTCGGACCCCCAC AGCCTGGAGGAGTTCTGCTCCGACCCGCACGCTGTGGCAGGTGCCCTCAAGTCCTATCTGCGGGAGCTGCCAGAG CCTCTGATGACCTTCGACCTCTATGATGACTGGATGAGGGCCAGCCTGAAGGAGCCAGGGGCCCGGCTGCAG GCCCTCCAAGAGGTGTGCAGCCGCCTACCCCCGAGAACCTCAGCAACCTCAGGTACCTGATGAAGTTCCTGGCA CGGCTGGCCGAGGAGCAGGAGGTGAACAAGATGACACCCAGCAACATCGCCATAGTCCTGGGACCCAACTTGCTG GTCGAGGCGCTGATCCAGAGCGCAGACACCCTCTTCCCTGGAGACATCAACTTCAACGTGTCAGGCCTCTTCTCA GCTGTTACCCTCCAGGACACAGTCAGTGACAGGCTGGCCTCTGAGGAACTTCCGTCCACTGCCGTGCCCACCCCA GCCACCACCCGGCTCCGGCTCCAGCTCCAGCTCCGGCCCCAGCCTTGGCTTCAGCAGCTACCAAGGAA AGGACAGAGTCTGAGGTGCCTCCCAGACCAGCCTCCCCCAAGGTCACCAGGAGTCCCCCGGAGACAGCTGCCCCA GTGGAGGACATGGCTCGGAGGACCAAGCGCCCGGCCCAGCCCGGCCCACCATGCCGCCCCCCAGGTCTCCGGC CGTCTGGTTGGCAGCAGCCTCCGAGCCCCCACAGTGCCACCCCCGTTACCCCCCACACCCCCTCAGCCTGCCCGG CGCCAAAGCCGGCGTTCACCAGCCTCCCCCAGCCCGGCCTCCCCAGGTCCAGCCCCAGCCCAGCCCAGTCTCTTTG ${\tt ACTCCCCCAGCTATCCCCCCTCAGCCCCCCCCCAGGAGCCTTGCCTCAGAGACCAAC} \underline{{\tt TGA}}{\tt GTGGCTGGTTTCTCC}$ GGGCCTCCAGCCTTTGCCCACAAGTGCCTCAGTGCCCACTGGGTCGGCCCCCATGGCCAGGAGGGCTCAGGACAA TCCTCTATTTCCTGACCTTTTCCTCGTCCACCCTGGGCTTGGGGACCCCCCCACCGGACTCTCCACTCTCCGGCA GGTCCTAGGGGAGCCACCGGAAGGAAGGAGGTTTGCCTGCTCCTACGGGACTGATTCTTCTCTTGCCGACATG **АЛАЛАЛАЛАЛАЛАЛАЛАЛАЛАЛАЛАЛАЛАЛАСТСGGG**

MAESFKELDPDSSMGKALEMSCAIQNQLARILAEFEMTLERDVLQPLSRLSEEELPAILKHKKKSLQKLVSDWNTL KSRLSQATKNSGSSQGLGGSPGSHSHTTMANKVETLKEEEEELKRKVEQCRDEYLADLYHFVTKEDSYANYFIRL LEIQADYHRRSLSSLDTALAELRENHGQADHSPSMTATHFPRVYGVSLATHLQELGREIALPIEACVMMLLSEGM KEEGLFRLAAGASVLKRLKQTMASDPHSLEEFCSDPHAVAGALKSYLRELPEPLMTFDLYDDWMRAASLKEPGAR LQALQEVCSRLPPENLSNLRYLMKFLARLAEEQEVNKMTPSNIAIVLGPNLLWPPEKEGDQAQLDAASVSSIQVV GVVEALIQSADTLFPGDINFNVSGLFSAVTLQDTVSDRLASEELPSTAVPTPATTPAPAPAPAPAPAPALASAAT KERTESEVPPRPASPKVTRSPPETAAPVEDMARRTKRPAPARPTMPPPQV\$GSSRSSPPAPPLPPGSGSPGTPQAL PRRLVGSSLRAPTVPPPLPPTPPQPARRQSRRSPASPSPASPSPVSLSNPAQVDLGAATAEGGAPEAISG VPTPPAIPPQPRPRSLASETN

PCT/US2003/028547

6539/6881 FIGURE 6036

GAGGCTGCGCGGAGCGGCCCTGCGCGACGTGCTGGGCCGGGCGCAGGGGGTCCTGTTCGACTGTGACGGGGTGCT GTGGAACGGCGAGCGCGCGTGCCGGGCGCCCCGGAGCTGCTGGAGCGGCTGGCGGGCCGGCAAGGCGGCTCT GTTTGTGAGCAACAACAGCCGGCGCGCGCGCCCGAGCTGGCCCTGCGCTTCGCGCGCCTCGGCTTCGGGGGGGCT GCGCGCCGAGCAGCTCTTCAGCTCCGCGCTGTGCGCCGCGCCTGCTGCGCCAGCGCCTGCCGGGCCTCCGGA $\tt CGCGCCGGGCCGTGTTCGTGCTGGGCGGCGAGGGGCTGCGCCGAGCTGCGCGCGGGGGCTGCGCCTGGC$ ATGGCACCCGCTGAGCGACGCAGCCGGACCCCTGGCACCGGGAGCCTGGCCGCTGCAGTGGAGACAGCCTCGGG ACGCCAGGCCCTGGTGGTGGGCAAGCCCAGCCCCTACATGTTCGAGTGCATCACGGAGAACTTCAGCATCGACCC CGCACGCACGCTTATGGTGGGTGACCGCCTGGAGACCGACATCCTCTTTGGCCACCGCTGCGGCATGACCACTGT GCCCACCCCCCCCCCTGATCCCGTAGGTGGAGGCGATGGGTCACGAGCCATGTTAAGCACAACCGGCTCC TTGGTCCAGTTCTGCACCGGGGTGGGGCCTGGGACCCGGGGAAGGTTTGAGGGCCCTTGCAACCCCCTCCCAGCAG TATTTCTTCCCTGTCACCTCCCTTGAAATCTGGGCCCTGGTGCCTGAAGATTCCCTCTATCCCTGAGT ACTTAGTCTTCTCCCCCTTCCCTGGGGCTTCTAGAGCTCTCTGCCCCTCAGGTCCTGGCCCTTGGGTCCTTGT CAACCAGAGGTCTAGGGAACCACAACCCTTATTGTCCTGGGTGGACCAATCCAAAGGCTAAGTGATAGTGACTCA TCAATGTTGGGTCCTGTGGGGTACCAGTTTAGGTTCCTAAGTAATAGTGACCCTTTCACGTCCTGGAGCCCGAGT GGACCAATCGGAAGCCTAAGTGACGATGACCCTCGCATGTCCTAGGTCCCTGGGTGGACCCCATCAGGACCCCAAG TGATAGTGACCCAGTGGTCTTTTAGATCCTCAGTAGAACAGTCCAGAAGCCTGAGAGACAGTGGCCCCTTGATAA TCTCCTTTACAAAGACTTGTGATGCTCTGGGGCTTCTGTGGCCAAGCCCCACCCTTTCCTGGTCATGGTACCCGT ACAGCGTTGATGGCCACAGCTCGAAGGGGGGCTTTCGTGTCCCCCTGTGCGGTCAGTGTTTTCAGTACCACCTCT ΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑ

MARCERLRGAALRDVLGRAQGVLFDCDGVLWNGERAVPGAPELLERLARAGKAALFVSNNSRRARPELALRFARL GFGGLRAEQLFSSALCAARLLRQRLPGPPDAPGAVFVLGGEGLRAELRAAGLRLAGDPSAGDGAAPRVRAVLVGY DEHFSFAKLREACAHLRDPECLLVATDRDPWHPLSDGSRTPGTGSLAAAVETASGRQALVVGKPSPYMFECITEN FSIDPARTLMVGDRLETDILFGHRCGMTTVLTLTGVSRLEEAQAYLAAGQHDLVPHYYVESIADLTEGLED

 ${\tt MACGLVASNLNLKPGECLRVRGEVAPDAKSFVLNLGKDSNNLCLHFNPRFNAHGDANTIVCNSKDGGAWGTEQREAUFPFQPGSVAEVCITFDQANLTVKLPDGYEFKFPNRLNLEAINYMAADGDFKIKCVAFD}$

 ${\tt GCTCCCGCCCTGGGGCGCCGCC} \underline{{\tt ATG}} {\tt ACGCCCGATCTGCTCAACTTCAAGAA} \underline{{\tt GGGATGGATGTCGATCTTGGA}}$ CGAGCCTGGAGAGCCTCCCCCCCCCCCCCCCCACCACCTCTACTTCGCAGTGGAAGAACATTGGTTTGTGCT GACAGATTCAAGTCTCAAATATTACAGAGACTCCACTGCTGAGGAGGCAGATGAGCTGGATGGTGAGATCGACCT GCGTTCCTGCACGGATGTCACTGAGTACGCGGTGCAGCGCAACTATGGCTTCCAGATCCACACCAAGGATGCTGT CTATACCTTGTCGGCCATGACCTCAGGCATCCGGCGGAACTGGATCGAGGCTCTGAGAAAGACCGTACGTCCAAC TTCAGCCCCAGATGTCACCAAGCTCTCGGACTCTAACAAGGAGAACGCGCTGCACAGCTACAGCACCCAGAAGGG GCGTCAGGCCTTGGACTACGTGGAGCTCTCGCCGCTGACCCAGGCTTCCCCGCAGCCGGGCCCCCAGCCCG CACTCCTGACCGCCTGGCCAAGCAGGAGGAGCTGGAGCGGGACCTGGCCCAGCGCTCCGAGGAGCGGCGCAAGTG GTTTGAGGCCACAGACAGCAGGACCCCAGAGGTGCCTGCTGGTGAGGGGCCCGCGCGGGGCCTGGGTGCCCCCCT GACTGAGGACCAGCAAAACCGGCTTAGTGAGGAGATCGAGAAGAAGTGGCAGGAGCTGGAGAAGCTGCCCCTGCG GGAGAATAAGCGGGTGCCCCTCACTGCCCTGCTCAACCAAAGCCGCGGAGAGCGCCGCGAGGGCCCCCAAGTGACGG TCAGAGTGCACTGAGATCCCAGGAGGATGGCCACATCCCCCGGGCTACATCTCACAGGAGGCATGTGAGCGCAG CCTGGCAGAGATGGAGTCCTCGCACCAGCAGGTGATGGAGGAGCTGCAGCGGCACCACGAGCGGGAGCTGCAGCG CCTGCAGCAGGAGAAGGAGTGGCTCCTGGCTGAGGAGACGGCAGCCACGGCCTCAGCCATTGAAGCCATGAAGAA GGCCTACCAGGAAGAGCTGAGCCGAGAGCTGAGCAAAACACGGAGTCTCCAGCAGGGCCCGGATGGCCTCCGGAA GCAGCACCAGTCAGATGTGGAGGCACTGAAGCGAGAGCTGCAGGTGCTATCGGAGCAGTACTCGCAGAAGTGCCT GGAGATTGGGGCACTCATGCGGCAGGCTGAGGAGCGCGAGCACAÇGCTGCCGCCGCTGCCAGCAGGAGGGCCAGGA GCTGCTGCGCCACAACCAGGAGCTGCATGGCCGCCTGTCAGAGGAGATAGACCAGCTGCGCGGCTTCATTGCCTC GCAGGGCATGGGCAATGGCTGCGGGCGCAGCAACGAGCGGAGTTCCTGCGAGCTAGAGGTGCTGCTTCGCGTAAA ${\tt AGAAAACGAACTCCAGTACCTAAAGAAGGAGGTGCAGTGCCTCCGGGACGAGCTCCAGATGATGCAGAAGGACAA}$ GCGCTTCACCTCGGGAAAGTACCAGGACGTCTATGTGGAGCTGAGCCACATCAAGACACGGTCTGAGCGGGAGAT CGAGCAGCTGAAGGAGCACCTGCGTCTTGCCATGGCCGCCCTCCAGGAGAAGGAGTCGATGCGCAACAGCCTGGC ${\tt TGAG}{\tt TAG}{\tt AGGTCCCGCCCAGCTGCAGACCCTCCAGGCTGGAGGACCAGCCGCCCTCCTTCCCTCGGATGGAAG}$ CACACACTGCATATCTGAGCGCCCCCCCGCACTGGGTCTCACCTTGCACCTTCTTCAGGATTTTATATGTGAAG TGGTGGCTGTGTCCCAACCCTGGTCCCCCTCTGTCTCCAGCCACCCTCTGCTTGGGCTTCTGAGCTGGTGGC ${\tt CCTGGCCCAGAGGTCTGGCGGAGGCCCAGGCAGCCATGGCGGGGTGTCTCTACAGGGGAGAGGCGGGAGCCT}$ GCCACCCTCTTCCTGCCCTACCTCCTACTAACACTTCCTGCCCCATTTGGACCCGTACCATGGGGCTCAGGACAG AGGGAGCTAGCAGCCTCCATGGCCCCACAGCCTCCTTCGAGGCTGTGCTGGGTGCAGAACCGCCAGAGCCA CCCAAAAGGTGTTTCTCTTCTGCTCCCTGAACCTCTTAACTTAATAAAACGTTCCAGCAGCT

MTPDLLNFKKGWMSILDEPGEPPSPSLTTTSTSQWKKHWFVLTDSSLKYYRDSTAEEADELDGEIDLRSCTDVTE
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AGSEVISRGGPRKADGQRQALDYVELSPLTQASPQRARTPARTPDRLAKQEELERDLAQRSEERRKWFEATDSRT
PEVPAGEGPRRGLGAPLTEDQQNRLSEEIEKKWQELEKLPLRENKRVPLTALLNQSRGERRGPPSDGHEALEKEV
QALRAQLEAWRLQGEAPQSALRSQEDGHIPPGYISQEACERSLAEMESSHQQVMEELQRHHERELQRLQQEKEWL
LAEETAATASAIEAMKKAYQEELSRELSKTRSLQQGPDGLRKQHQSDVEALKRELQVLSEQYSQKCLEIGALMRQ
AEEREHTLRRCQQEGQELLRHNQELHGRLSEEIDQLRGFIASQGMGNGCGRSNERSSCELEVLLRVKENELQYLK
KEVQCLRDELQMMQKDKRFTSGKYQDVYVELSHIKTRSEREIEQLKEHLRLAMAALQEKESMRNSLAE

GGGAGGCAGAGGGGGGGGGGGAGGCAGAGGCAGAGGCCGAGCCCGGTGCCGAGACCAAGCGACAGA CCGGCGGGGCTGGGCCTCGCAAAGCCGGCTCGGCGAGCTCTCCCGACACCCGAGCCGGGGAGGAAAAGCAGCGAC TCCTCGCTCGCATCCCCGGGAGCCGCACTCCAGACTGGCCCGGTAGTCAGGGGCTCAGGAGCAGATCCCGAGGCA GGCTTTGCTCAGCCTCCGACGAGGGCTGGCCCTTTGGAAGGCGCCTTCAACAGCCGGACCAGACAGGCCACCATG ACCGAGAATTCCACGTCCGCCCCTGCGGCCAAGCCCAAGCGGGCCAAGGCCTCCAAGAAGTCCACAGACCACCCC AAGTATTCAGACATGATCGTGGCTGCCATCCAGGCCGAGAAGAACCGCGCTGGCTCCTCGCGCCAGTCCATTCAG AAGTATATCAAGAGCCACTACAAGGTGGGTGAGAACGCTGACTCGCAGATCAAGTTGTCCATCAAGCGCCTGGTC AAGAAGGCTGCCTCCAAAGCCCCAACCAAGAAACCCAAAGCCACCCGGTCAAGAAGCCAAGAAGAAGCTGGCT GCCACGCCCAAGAAAGCCAAAAAACCCAAGACTGTCAAAGCCAAGCCGGTCAAGGCATCCAAGCCCAAAAAGGCC CGGACACTCCCTCCTGTCTCCTATTTTCTGTAAATAATTTTCTCCTTTTTTCTCTCTTGATGCTCACCACCACCT TTTGCCCCCTTCTGTTCTGACTTTATAAGAGACAGGATTTGGATTCTTCAGAAATTACAGAATAATTCATTTTTC CTTAACCAGTTGTGCAAGGACAGCAACCAATCTAATGATGAGAATGTACTTATATTTTGTTTTGCTATTAAC GTGGGGAGAAGACACAAGGCAGTTTGTTCTGGCTAGATGAGAGGGAACCCAGGAATTGTGAGGTTAGCAGGAATA TCTTTAGGGTGAGTGAGTTTCTTTGAGTTGGGCACCCGTTGTGAGAGTTTCAGAACCTTTGGCCAGCAGGAGAG GTGGTGAGCAGTGGGGGCCCAAACCCAGTTTCCTTCTCATTTTTGTTAGTTTGCGCTTTCGGCCTCCCTATTTTC TTAGGGAAGGGGAGTGGGGTCCAAGTGACAGCTGGATGGGAGAAGCCATAGTTTCTCCCAGTCAGCTAGGATGTA GCCATTGGGGGATCTTTGTGGCTTCAGCAAATTCTCTTGTTAAACCGGAGTGAAAACTTCAGGGGAAGGGTGGGG ACTTAAAACCTCCCGATCTCTTTTTGAGTCCTTTATTATAAGTAGTTGTAGCTGCGGGAGGGGGAGGGGGAGTGG GCGGGCAGTGGATAGTAAGACTTACTGCAGTCGATTTGGGATTTGCTAAGTAGTTTTACAGAGCTAGATCTGTGT GCATGTGTGTGTTTTGTGTATATATACATATCTAGGGCTAGTACTTAGTTTCACACCCGGGAGCTGGGAGAAAAAA AAGGGAG

 ${\tt MTENSTSAPAAKPKRAKASKKSTDHPKYSDMIVAAIQAEKNRAGSSRQSIQKYIKSHYKVGENADSQIKLSIKRL\\ VTTGVLKQTKGVGASGSFRLAKSDEPKKSVAFKKIKKEIKKVATPKKASKPKKAASKAPTKKPKATLF}$

 $\tt GTCTTTCCGGCGGTGCTCGCAAGCGAGGCAGCC\underline{ATG}{}TCTTATCCCGCTGATGATTATGAGTCTGAGGCGGCTTAT$ GACCCCTACGCTTATCCCAGCGACTATGATATGCACACAGGAGATCCAAAGCAGGACCTTGCTTATGAACGTCAG TATGAACAGCAAACCTATCAGGTGATCCCTGAGGTGATCAAAAACTTCATCCAGTATTTCCACAAAACTGTCTCA GATTTGATTGACCAGAAAGTGTATGAGCTACAGGCCAGTCGTGTCTCCAGTGATGTCATTGACCAGAAGGTGTAT GCTGAAGCCATTGCTCCACAGGTTGGCAATGATGCTGTCTTCCTGATTTTATACAAAGAATTATACTACAGGCAC ATATATGCCAAAGTCAGTGGGGGACCTTCCTTGGAGCAGAGGTTTGAATCCTATTACAACTACTGCAATCTCTTC AACTACATTCTTAATGCCGATGGTCCTGCTCCCCTTGAACTACCCAACCAGTGGCTCTGGGATATTATCGATGAG TTCATCTACCAGTTTCAGTCATTCAGTCAGTACCGCTGTAAGACTGCCAAGAAGTCAGAGGAGGAGATTGACTTT ATCAACCGACAGTTGGAGGTATACACAAGCGGAGGTGACCCTGAGAGTGTGGCTGGGGAGTATGGGCGGCACTCC ACATACTATTATGTTGGGTTTGCATATTTGATGATGCGTCGTTACCAGGATGCCATCCGGGTCTTCGCCAACATC $\tt CTCCTCTACATCCAGAGGACCAAGAGCATGTTCCAGAGGACCACGTACAAGTATGAGATGATTAACAAGCAGAAT$ GAGCAGATGCATGCGCTGGCCATTGCCCTCACGATGTACCCCATGCGTATCGATGAGAGCATTCACCTCCAG $\tt CTGCGGGAGAAATATGGGGACAAGATGTTGCGCATGCAGAAAGGTGACCCACAAGTCTATGAAGAACTTTTCAGT$ TACTCCTGCCCCAAGTTCCTGTCGCCTGTAGTGCCCAACTATGATAATGTGCACCCCAACTACCACAAAGAGCCC TTCCTGCAGCAGCTGAAGGTGTTTTCTGATGAAGTACAGCAGCAGCCCAGCTTTCAACCATCCGCAGCTTCCTG AAGCTCTACACCACCATGCCTGTGGCCAAGCTGGCTTCCTGGACCTCACAGAGCAGGAGTTCCGGATCCAG $\tt CTTCTTGTCTTCAAACACAAGATGAAGAACCTCGTGTGGACCAGCGGTATCTCAGCCCTGGATGGTGAATTTCAGCCTGTGTGAACACAAGATGAAGAACCTCGTGTGGACCAGCGGTATCTCAGCCCTGGATGGTGAATTTCAGCCTGTGTGAACACAAGATGAAGAACCTCGTGTGGACCAGCGGTATCTCAGCCCTGGATGGTGAATTTCAGCCTGTGTGAACAAGAACCTCGTGTGGACCAGCGGTATCTCAGCCCTGGATGGTGAATTTCAGCCTGTGTGAATTTCAGCCTGTGTGAATTTCAGCCTGTGTGAATTTCAGCCTGTGTGAATTTCAGCCTGTGTGAATTTCAGCCTGTGTGAATTTCAGCCTGTGTGAATTTCAGCCTGTGTGAATTTCAGCCTGTGTGAATTTCAGCTGAATTTCAGCTGTGAATTTCAGCTGAATTTCAGCTGAATTTCAGCTGAATTTCAGAATT$ TCAGCCTCAGAGGTTGACTTCTACATTGATAAGGACATGATCCACATCGCGGACACCAAGGTCGCCAGGCGTTAT GGGGATTTCTTCATCCGTCAGATCCACAAATTTGAGGAGCTTAATCGAACCCTGAAGAAGATGGGACAGAGACCT $\underline{\mathbf{TGA}}^{\mathsf{L}}$ TGATATTCACACACATTCAGGAACCTGTTTTGATGTATTATAGGCAGGAAGTGTTTTTGCTACCGTGAAACC TTTACCTAGATCAGCCATCAGCCTGTCAACTCAGTTAACAAGTTAAGGACCGAAGTGTTTCAAGTGGATCTCAGT AAAGGATCTTTGGAGCCAGAAAAAAA

MSYPADDYESEAAYDPYAYPSDYDMHTGDPKQDLAYERQYEQQTYQVIPEVIKNFIQYFHKTVSDLIDQKVYELQ
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EQRFESYYNYCNLFNYILNADGPAPLELPNQWLWDIIDEFIYQFQSFSQYRCKTAKKSEEEIDFLRSNPKIWNVH
SVLNVLHSLVDKSNINRQLEVYTSGGDPESVAGEYGRHSLYKMLGYFSLVGLLRLHSLLGDYYQAIKVLENIELN
KKSMYSRVPECQVTTYYYVGFAYLMMRRYQDAIRVFANILLYIQRTKSMFQRTTYKYEMINKQNEQMHALLAIAL
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VQQQAQLSTIRSFLKLYTTMPVAKLAGFLDLTEQEFRIQLLVFKHKMKNLVWTSGISALDGEFQSASEVDFYIDK
DMIHIADTKVARRYGDFFIRQIHKFEELNRTLKKMGQRP

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6550/6881 FIGURE 6047A

GCTGGCCTGGTGCCGCCGCCAGTGCGAGGGCTACCGCGGCGTGGAGATCCGCGACCTGAGCAGCTCCTTCCGGGA CGGCCTGGCCTTCTGCGCCATCCTGCACCGGCCCCGACCTGCTAGATTTTGATTCGCTTTCCAAGGACAA TGTCTTCGAGAATAACCGTTTGGCCTTTGAAGTGGCTGAGAAGGAGCTGGGGATCCCCGCTCTCCTGGACCCCAA TGACATGGTCTCCATGAGCGTCCCTGACTGCCTCAGCATCATGACCTATGTGTCCCCAGTATTACAACCACTTCTG CAGTCCTGGCCAAGCTGGTGTCTCGCCACCCAGAAAGGGCCTTGCACCCTGTTCCCCGCCGTCTGTAGCACCCAC TCCAGTGGAACCAGAAGATGTGGCTCAGGGCGAGGAGCTCTCCTCAGGCAGCCTGTCAGAGCAGGGCACCGGCCA GACCCCCAGCAGCACGTGCGCAGCCTGCCAGCATGTGCACTTGGTGCAGCGCTACCTGGCTGACGGCAGGCT GTACCATCGCCACTGCTTCCGGTGTCGGCGGTGCTCCAGCACCCTGCTCCCTGGGGCTTATGAGAATGGGCCTGA GGAGGGCACCTTTGTGTGTGCAGAACACTGTGCCAGGCTGGGCCCGGGGACACGGTCGGGGACCAGGCCTGGGCC CTTCTCACAGCCAAAGCAGCAGCAGCAGCAGCAACTCGCAGAAGATGCCAAGGATGTTCCAGGAGGCGGCCCCAG CTCCAGTGCTCCTGCAGGGGCTGAGGCCGATGGACCCAAGGCCAGGCCCTGAGGCCCGGCCGCAGATCCCTACCAA GCCCCGGGTTCCTGGCAAACTACAGGAGCTGGCCAGCCCCCTGCGGGCCCCCACCCCTGCCCCAGGAAGGC CTCTGAGAGCACCCCCAGCACCCCCACGCCCCGGCCCCGCTCCAGTCTGCAGCAGGAGAACCTGGTGGAGCA GGCTGGCAGCAGCCTGGTGAACGGGAGACTGCACGAACTGCCTGTCCCCAAGCCGAGGGGGACACCGAAGCC GGAGGTGGCCCAGCCGAGCCCAACGGCCAGCCTGGAGTCCAAACCCTATAACCCCTTTGAGGAGGAGGAGGAGGA CAAGGAGGAAGAGGCTCCAGCTGCACCCAGCCTGGCCACCAGCCCTGGCCCTGGGCCACCCGGAGTCCACACCCAA GTCCCTGCACCCCTGGTACGGCATCACCCCTACCAGCAGCCCCAAGACAAAGAAGCGCCCTGCCCCGCGCGCACC CAGCGCGTCCCCACTGGCTCTCCACGCCTCCCGCCTCTCGCACTCGGAGCCGCCCTCGGCCACACCATCGCCAGC GCCCAAGAGCTCCTCAGAGCCTGCTGTCCATGCCCCTGGTACCCCTGGAAACCCTGTCAGCCTCTCTACCAACTC CAGGACCAGGGGCAGCTCAGGTCCCCAGCCAGCCAAGCCCTGCAGTGGCGCCACCCCAACGCCTCTCTTGTTGGT TGGAGACAGGAGCCCGGTGCCTTCCCCTGGAAGCTCGTCCCCACAGCTGCAGGTAAAGTCCTCCTGCAAGGAGAA TCCTTTTAACCGGAAGCCATCACCTGCAGCGTCCCCAGCCACAAAGAAGGCCACCAAGGGATCCAAGCCAGTGAG GCCACCTGCCCCTGGACACGGCTTTCCACTCATCAAACGCAAGGTCCAGGCTGACCAGTACATCCCTGAGGAGGA CATCCATGGAGAGATGGATACCATTGAGCGCCGGCTGGATGCCCTGGAGCACCGTGGGGGTGCTGCTGGAGGAGAA GCTGCGTGGCGGCCTGAATGAGGGCCGTGAGGATGACATGCTGGTGGACTGGTTCAAGCTCATCCACGAGAAGCA CCTACTGGTGCGGCGAGAGTCCGAGCTCATCTATGTCTTCAAGCAGCAGAACCTGGAGCAGCGCCAGGCTGATGT CGAGTATGAGCTCCGGTGCCTCCTCAATAAGCCAGAAAAGGACTGGACGGAGGAGGACCGGGCCCGGGAGAAGGT GCTGATGCAGGAGCTTGTGACCCTCATTGAGCAGCGCAACGCTATCATCAACTGCCTGGATGAGGACCGGCAGAG $\verb|CCCCAGAGACAAGAGCTAA| CAGCACGAGAAGCCAGTTGGGGACTGCCCCCTCCTGGAGCAGCTCCTGGGCTGTGC|$ GATGGCCTCTTCCTCCTCAGGGACCTCTGACTGCTCTGGGCCAAAGAATCTCTTGTTTCTTCTCCGAGCCCCAGG CAGCGGTGATTCAGCCCTGCCCAACCTGATTCTGATGACTGCGGATGCTGTGACGGACCCAAGGGGCCAAATAGGG TCCCAGGGTCCAGGGAGGGGCGCCTGCTGAGCACTTCCGCCCCTCACCCTGCCCAGCCCCTGCCATGAGCTCTGG GGAACTCTGTTTCTGAAGTCTTCAGTTAAGTTTGAGTTTATGACTGAGTGGCCTGTACTGTCAGACGTGAATGGG CCTGACGGGCAAATCCATCCCTCTCCCCCACAGTTCCAGGAGCGGCTTCCCTCGTCTCCCCTTACTCCACAGG GAGCCTCCCTTGCCAGGACCAGGGCTGCGACGGCCATGCTGGGGGCAGGTGAGTGCTCTGTTAGCTGCTCCCAGTG CTGTCCCCAGGCTGCAGTTCTGGTCCCTGGTTGTCAGGTAGGAAGGGTGCACTTGAAGCAGGTGCTCATCTCGGT

6551/6881 FIGURE 6047B

CTACTCACCCCTCTGGGATGGCTATGGGAGAGGAGGAGTGATGGGGACCGCCACCTTTTCTGCAGGAAATGTGCC CAGCAGCTCTTGGTCAAAGCACTGTTGCTATAAGCTATCTCTGGGATGCCTCTAGGCCCCCTTCCCTCTACACAC CTCTGGGAAAAGATTACACTGTATTAACTCTCGAGGAGTTTCCTCACCAATAAACAGACAACCTCAACTGCCAGT GCCCTGCAGCCTCGGGCCACAGCGGCAGCCTTGTTTGCCTTCCCACCTGCCTCTGCCACACCTGGTGGCTGAACA TCTCTGGTCGCCCAGAGGCCATGTTGGGGCCATCCTCCAAGAGGGATCTCTGCCCTCACCGCCTGCCACTGGGCA GGATCCCTTTCCTCTGCAGGGAGAGGTGGCTCCTCGGCCATGCAGCCCCTGGCAGGCTCCTTCTAAACATGCCTG TTGACCTGGAGCTGGCGCCACCAACTCCAGGGCCTTTCCAGGGCCAGACAGGTAACACGCATGAACCCGAGTGAC AGCTCTGACGGGCTGTTTCGGTGTCAGGAGACAAAGCTGGCAGGGGCAGGGGTGAACTGGAGGCAAGTCAAGTCA CCTGTGGCCTGTGGGGCTGAATGTGGGCCCGGTGTTGCCAGATCCTTTGTCATAAGAAGCTAGAAATCCAGATTT TGTCGCCCAGGCTGGAGTGCAGTGGCGCGATCTCAGCTCACTGCAAGCTCCGCCTCCTGGGTTCACGCCATCCTC GTGTGTCCAGGGTGGACTGGATTTGTCCTGGGGGGTTCTCTGGTTTGCTGCCTCCTGÁCCACATGATGGGGCCTT CGAGGTCGAGGACAACTGTTCCCATTAGATTGCACCCTCTGCCCTCAGGTTCTTGAGGGTGTGTGGACACAGAGG CTTTCCATGGGATGTCCCTGAGCCGGCCCTTGATTGGGGCCCTCACCATTTACAGGGCCGTTTTATTCTGCAAACC ATATTTTGGTGATTTAGTGGGACAAGCAAATGACAGAATACCGGAGAAGGCAGGGATCGTGGGTGTCAGGAGCCA GAGGGGAGGGGACAGATGTGCTGTACAGGACAAGGTGTCAGGTGACTCCTTCCCAGCAGGGCCTCGCAGATG GGCTCTAGGTCGCTCCCACCTTTTCATGTTTCTTTCTGTGGCCATGGGTATAGTGGAAAGACATAAAGCTAAAGC CAACTTTTAATCCTGAATGCACTGCTTGCCAGGTAAATGCCCTTGGTTGTGGTATCTTGTTGAGACTTAGTTTTC ACAGAGGGATAATGAACCGTTGCAGAGGTTTATTGAGATCATTAACAGAGTGGAATTCAGCACCCGCCACAGCAG CCAGCCATGGG

MAGPRGALLAWCRRQCEGYRGVEIRDLSSSFRDGLAFCAILHRHRPDLLDFDSLSKDNVFENNRLAFEVAEKELG
IPALLDPNDMVSMSVPDCLSIMTYVSQYYNHFCSPGQAGVSPPRKGLAPCSPPSVAPTPVEPEDVAQGEELSSGS
LSEQGTGQTPSSTCAACQQHVHLVQRYLADGRLYHRHCFRCRRCSSTLLPGAYENGPEEGTFVCAEHCARLGPGT
RSGTRPGPFSQPKQQHQQQLAEDAKDVPGGGPSSSAPAGAEADGPKASPEARPQIPTKPRVPGKLQELASPPAGR
PTPAPRKASESTTPAPPTPRPRSSLQQENLVEQAGSSSLVNGRLHELPVPKPRGTPKPSEGTPAPRKDPPWITLV
QAEPKKKPAPLPPSSSPGPPSQDSRQVENGGTEEVAQPSPTASLESKPYNPFEEEEEDKEEEAPAAPSLATSPAL
GHPESTPKSLHPWYGITPTSSPKTKKRPAPRAPSASPLALHASRLSHSEPPSATPSPALSVESLSSESASQTAGA
ELLEPPAVPKSSSEPAVHAPGTPGNPVSLSTNSSLASSGELVEPRVEQMPQASPGLAPRTRGSSGPQPAKPCSGA
TPTPLLLVGDRSPVPSPGSSSPQLQVKSSCKENPFNRKPSPAASPATKKATKGSKPVRPPAPGHGFPLIKRKVQA
DQYIPEEDIHGEMDTIERRLDALEHRGVLLEEKLRGGLNEGREDDMLVDWFKLIHEKHLLVRRESELIYVFKQQN
LEQRQADVEYELRCLLNKPEKDWTEEDRAREKVLMQELVTLIEQRNAIINCLDEDRQREEEEDKMLEAMIKKKEF
QREAEPEGKKKGKFKTMKMLKLLGNKRDAKSKSPRDKS

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GTCCGGCCAGGGTGGTTGGTGGTAAGGATTCAGGCTCCGTCCTAACGAGGCCGTGGCCTGAGGCTCAGGGCCCCC $\tt CGCCCCTCCCAGCCCAGCCTCACCAGCCTCCCAGCCCCGAGCTGGACCGCACACCTTGGGACACGGTTTTCC$ ACTTCCTAAGGACGAGCCCCAGACTGGAGGAGGAGGTCCGAGGAGGTGGGCGTTGGACTCTTTGCGAGGACCCCGG CGGAGGTGGAGCTGAGCCCCGTGGGCTCGGAGGAGCCCCGCTGCCTGTCCCCGGGGAGCGCGCCCTCGCTAGGGC CCGACGGCGGCGGCGGATCGGGCCTGCGAGCCAGCCCGGGGCCAGGCGAGCTGGGCAAGGTCAAGAAGGAGC AGCAGGACGGCGAGGCGGACGATGACAAGTTCCCCGTGTGCATCCGCGAGGCCGTCAGCCAGGTGCTCAGCGGCT TGAACGCCTTCATGGTGTGGGCTCAGGCAGCGCGCAGGAAGCTCGCGGACCAGTACCCGCACCTGCACAACGCTG AGCTCAGCAAGACGCTGGGCAAGCTCTGGAGGCTGCTGAACGAAAGTGACAAGCGCCCCTTCATCGAGGAGGCTG AGCGGCTCCGTATGCAGCACAAGAAAGACCACCCGGACTACAAGTACCAGCCCAGGCGGCGGAAGAACGGGAAGG CCGCCCAGGGCGAGGCGGAGTGCCCCGGTGGGGAGGCCGAGCAAGGTGGGACCGCCGCCATCCAGGCCCACTACA AGAGCGCCCACTTGGACCACCGGCACCCAGGAGAGGGCTCCCCCATGTCAGATGGTAACCCCGAGCACCCCTCAG GCCAGAGCCATGGCCCACCCACCCCTCCAACCACCCCGAAGACAGAGCTGCAGTCGGGCAAGGCAGACCCGAAGC GGGACGGCGCTCCATGGGGGGGGGGGAGCCTCACATCGACTTCGGCAACGTGGACATTGGTGAGATCAGCC ACGAGGTAATGTCCAACATGGAGACCTTTGATGTGGCTGAGTTGGACCAGTACCTGCCGCCCAATGGGCACCCAG GCCATGTGAGCAGCTACTCAGCAGCCGGCTATGGGCTGGCCAGTGCCCTGGCCGTGGCCAGTGGACACTCCGCCT GGATCTCCAAGCCACCAGGCGTGGCTCTGCCCACGGTCTCACCACCTGGTGTGGATGCCAAAGCCCAGGTGAAGA CAGAGACCGCGGGGCCCCAGGGGCCCCACACTACACCGACCAGCCATCCACCTCACAGATCGCCTACACCTCCC TCAGCCTGCCCCACTATGGCTCAGCCTTCCCCTCCATCTCCCGCCCCCAGTTTGACTACTCTGACCATCAGCCCT CAGGACCCTATTATGGCCACTCGGGCCAGGCCTCTGGCCTCTACTCGGCCTTCTCCTATATGGGGCCCTCGCAGC GGCCCCTCTACACGGCCATCTCTGACCCCAGCCCCTCAGGGCCCCAGTCCCACAGCCCCACACACTGGGAGCAGC CAGTATATACGACACTGTCCCGGCCCTAAAGGGGGCCCTGTCGCCACCACCCCCCGCCCAGCCCTGCCCCAGC CTGTGTGCCCTGTTCCTTGCCCACCTCAGGCCTGGTGGTGGCAGTGGAGGAGGCTGAGGAGGCTGAAGAGGCTGA CCAGGAGAACAGGCTGGACAGAGGAGGAGGAGGTTGACTGTTGCACCCACACTGAAAGATGAGGGGCTGCACCTT CCCCAGGAATGACCCTCTATCCCAGGACCTGAGAAGGGCCTGCTCACCCTCCTCGGGGAGGGGAAGCACCAGGG CATGCCACCTATGCCACAGTGCCTAAGGGCTAGGCCACCCAGAGACTGTGCCCGGAGCTGGCCGTGTCTCCCACT CAGGGGCTGAGAGTAGCTTTGAGGAGCCTCATTGGGGAGTGGGGGGTTCGAGGGACTTAGTGGAGTTCTCATCCC TTCAATGCCCCCTCCTTTCTGAAGGCAGGAGGAGTTGGCACAGAGGCCCCCTGATCCAATTCTGTGCCAATAA CCTCATTCTTTGTCTGAGAAACAGCCCCCAGTCCTCCACTACAACCTCCATGACCTTGAGACGCATCCCAGG CTGCTCAGGCCCTAACCCTTGGCTCCAGGAGACACAGGGCCCAGCACCCAGGTTGCTGTCGGCAGGCTGAAGACA CTAGAATCCTGACCTGTACATTCTGCCCTTGCCTCTTACCCCTTGCCTCCCAGTGGTATTTGAATAAAGTATGTA GCTATATCTGCCCCTATTTTCCTGTTCTGCAGCCCCCCAAATCCACATGTAACTCATTACTGTCTCCTGTTATTT ATCTCAGTAGTCCCCTCTCCTAGCCACTCTAGCCCCTATTAACTCTGCATTAAGCATTCCACATAATAAAATTAA AGGTTCCGGTTAAAAAAAAAAAAAAAAAAAAAA

MAEEQDLSEVELSPVGSEEPRCLSPGSAPSLGPDGGGGGGGGLRASPGPGELGKVKKEQQDGEADDDKFPVCIREA VSQVLSGYDWTLVPMPVRVNGASKSKPHVKRPMNAFMVWAQAARRKLADQYPHLHNAELSKTLGKLWRLLNESDK RPFIEEAERLRMQHKKDHPDYKYQPRRKNGKAAQGEAECPGGEAEQGGTAAIQAHYKSAHLDHRHPGEGSPMSD GNPEHPSGQSHGPPTPPTTPKTELQSGKADPKRDGRSMGEGGKPHIDFGNVDIGEISHEVMSNMETFDVAELDQY LPPNGHPGHVSSYSAAGYGLGSALAVASGHSAWISKPPGVALPTVSPPGVDAKAQVKTETAGPQGPPHYTDQPST SQIAYTSLSLPHYGSAFPSISRPQFDYSDHQPSGPYYGHSGQASGLYSAFSYMGPSQRPLYTAISDPSPSGPQSH SPTHWEQPVYTTLSRP

FIGURE 6051

CTGGGGGTCCGTTCCCCAACTTCCTCGGCGCTCCGGACTCCCAAGTCTCCGCCGGACCCTCCTTTGGATATTCCT CGTGTCTCCGATTCTGAGAGAGGGGGAAGACGGTGGGGCCTCCCCACCTGCCCCGCAGAAGATGCAGTTCTTTGG $\verb|CCGCCTGGTCAATACCTTCAGTGGCGTCACCAACTTGTTCTCTAACCCATTCCGGGTGAAGGAGGTGGCTGTGGC|\\$ CGACTACACCTCGAGTGACCGAGTTCGGGAGGAAGGGCAGCTGATTCTGTTCCAGAACACTCCCAACCGCACCTG GGACTGCGTCCTGGTCAACCCCAGGAACTCACAGAGTGGATTCCGACTCTTCCAGCTGGAGTTGGAGGCTGACGC CCTAGTGAATTTCCATCAGTATTCTTCCCAGCTGCTACCCTTCTATGAGAGCTCCCCTCAGGTCCTGCACACTGA GGTCCTGCAGCACCTGACCGACCTCATCCGTAACCACCCCAGCTGGTCAGTGGCCCACCTGGCTGTGGAGCTAGG GATCCGCGAGTGCTTCCATCACAGCCGTATCATCAGCTGTGCCAATTGCGCGGAGAACGAGGAGGGCTGCACACC CCTGCACCTGGCCTGCCGCAAGGGTGATGGGGAGATCCTGGTGGAGCTGGTGCAGTACTGCCACACTCAGATGGA TGTCACCGACTACAAGGGAGAGCCGTCTTCCATTATGCTGTCCAGGGTGACAATTCTCAGGTGCTGCAGCTCCT TGGAAGGAACGCAGTGGCTGACCAGGTGAATAACCAAGGGCTGACCCGGCTGCACCTGGCCTGCCAGCT GGGGAAGCAGGAGATGGTCCGCGTGCTGCTGTGCAATGCTCGGTGCAACATCATGGGCCCCAACGGCTACCC CATCCACTCGGCCATGAAGTTCTCTCAGAAGGGGTGTGCGGAGATGATCATCAGCATGGACAGCCAGATCCA CAGCAAAGACCCCCGTTACGGAGCCAGCCCCCTCCACTGGGCCAAGAACGCAGAGATGGCCCGCATGCTGAA ACGGGGCTGCAACGTGAACAGCACCAGCTCCGCGGGGAACACGGCCCTGCACGTGGCGGTGATGCGCAACCGCTT CGACTGTGCCATAGTGCTGCTGACCCACGGGGCCAACGCGGATGCCCGCGGAGAGCACGGCAACACCCCGCTGCA CCTGGCCATGTCGAAAGACAACGTGGAGATGATCAAGGCCCTCATCGTGTTCGGAGCAGAAGTGGACACCCCGAA TGACTTTGGGGAGACTCCTACATTCCTAGCCTCCAAAATCGGCAGACTTGTCACCAGGAAGGCGATCTTGACTCT GCTGAGAACCGTGGGGGCCGAATACTGCTTCCCACCCATCCACGGGGTCCCCGCGGAGCAGGGCTCTGCAGCGCC ACATCATCCCTTCTCCCTGGAAAGAGCTCAGCCCCCACCGATCAGCCTAAACAACCTAGAACTACAGGATCTCAT GCACATCTCACGGGCCCGGAAGCCAGCGTTCATCCTGGGCTCCATGAGGGACGAGAAGCGGACCCACGACCACCT GCTGTGCCTGGATGGAGGAGGAGTGAAAGGCCTCATCATCATCCAGCTCCTCATCGCCATCGAGAAGGCCTCGGG TGTGGCCACCAAGGACCTGTTTGACTGGGTGGCGGCACCAGCACTGGAGGCATCCTGGCCCTTGCCATTCTGCA CAGTAAGTCCATGGCCTACATGCGCGGCATGTACTTTCGCATGAAGGATGAGGTGTTCCGGGGCTCCAGGCCCTA CAAGGTGATGCTGACAGGGACACTGTCTGACCGGCAGCCGGCTGAACTCCACCTCTTCCGGAACTACGATGCTCC AGAAACTGTCCGGGAGCCTCGTTTCAACCAGAACGTTAACCTCAGGCCTCCAGCTCAGCCCTCAGACCAGCTGGT GTGGCGGCCGGAACCAGCGGGCAGCTCCTACTTACTTCCGACCCAATGGGCGCTTCCTGGACGGTGGGCT GCTGGCCAACACCCCACGCTGGATGCCATGACCGAGATCCATGAGTACAATCAGGACCTGATCCGCAAGGGTCA GGCCAACAAGGTGAAGAAACTCTCCATCGTTGTCTCCCTGGGGACAGGAGGTCCCCACAAGTGCCTGTGACCTG TGTGGATGTCTTCCGTCCCAGCAACCCCTGGGAGCTGGCCAAGACTGTTTTTGGGGCCCAAGGAACTGGCCAAGAT GGTGGTGGACTGTTGCACGGATCCAGACGGGCGGGCTGTGGACCGGGCACGGGCCTGGTGCGAGATGGTCGGCAT CCAGTACTTCAGATTGAACCCCCAGCTGGGGACGCACATCATGCTGGATGAGGTCAGTGACACAGTGCTGGTCAA CGCCCTCTGGGAGACCGAGGTCTACATCTATGAGCACCGCGAGGAGTTCCAGAAGCTCATCCAGCTGCTGCTCTC ACCCTGAGGGTCCCCAGCCTCTCACCGGCCCCAGCTGACCTCGTCCATTCAGCCCCTGCCAGGCCAAGCCCAGCC ACTGCCCTCCGGGCAGATCTGGGCCCAGGCACCTCTGAGTCCATAGACCAGGCCTGGGAGAATGCCAAGCTGCC $\tt TGCCCGAGGCTGGTCCTGAAGGCCTGTCTCCCACTAACCCCGCCTTCCAGCACTTTCTGTCATTCCAGGCTGGGA$ AAGTCTAGAGCCCCCTTTGGCCCCTTTCCCTGACTGTCAAGGACAACTGACTCCCCCATCAGCTCAAACATTAAG GGTACCCGGGCACAACCGTACCCCTGCCCCCAGCCCCAGCCTCCCTGAGGGCCTGCCGGGCTGCCTCTGCCCCAG GCTGGGACTAAAGAAATGGGTGTCCCCCACCCCATCAGCTGGGAAAGCCCAGGCCGCAGGAGTGGGATGCCCGTT GGACTTTGCCCCTCACACTGGCCCAGCCCCTCACACTGCCCCGAGAACCCTCAGCTCTCAAAGGTCACTC

CTTACAACTCCGCGCGCCCCCCGCCCCCCCCCCCCCACAAAAACTCAGCGCAGCGCTCCCGGGCGC CCGGTTCAGAGCGACCTGCGGCTCAGAGCGGAGGGGAGACTGACCGGAGCGCGGATCGGGACAGCGGCCGGGACA GCGGCGAGACGCGCGTGTGTGAGCGCGCCGGACCAAGCGGGCCCAGAAGCGGGTCTGCAGCCCAGAGGGCACCTT CTGCAAACATGTCTGTGGATCCCCTATCCAGCAAAGCTCTAAAGATCAAGCGAGAGCTGAGCGAGAACACGCCGC ACCTGTCGGACGAGGCGCTGATGGGGCTGTCGGTGCGCGAGCTGAACCGGCATCTGCGCGGGGCTCTCCGCCGAGG AGGTGACACGGCTCAAGCAGCGGCGCCGCACACTCAAAAACCGTGGCTACGCCGCCAGCTGCCGCGTGAAGCGCG TGTGCCAGAAGGAGGAGCTGCAGAAGCAGAAGTCGGAGCTGGAGCGCGAGATGGACAAGCTGGCGCGAGAACG CCGCCGGGGCCCGCCACGCTCGTGGCGCCGGCCAGCGTCATCACCATCGTCAAGTCCACCCCGGGCTCGGGGT $\tt CTGGCCCGGCCCGGACCCGGCCCACGGCCCGGCCTCCTGCTCC\underline{TAG} TGCCCGCCCCGCCATGCCTCA$ GCCACGCCCTCCGGCCTCAGCTCCCCCAAAGTGCCTGAGCGCCGCCTCTGTGCCCAGGTCCCATTTCTCTG CAGCACTGGCCCCTTGGTGCACACACTTCCCTTCGTGGGCCCTGTCTTCCTCTTGCAGCCCCCCAAACTGGGAC CGAATGACCCTGGGAAGGGGAAGTTGGGTAGGTTGGGGATGGGGCAGAGGTCTGGATCTGGGATCGCCCTTGGCT GAAAGTTTAGCCTTTTTAGATTGAGAGATACAGAGCCGGCTTAGAGAACAGCTGTTGGGGGGAGAAGAGGGCACCC CTCATCTTGGAAACTGCTCTTATTGTGCCAATATGCCCTCCAAACCCTCCCAGGATTCAAAGCTAGGTTTGGCTG TCTGTGACTTACGGGACCGTCCTGCTGAGAAATTGCACTGAAGAGATGCCCCCACCTCTGGTTGGGCCTGGGGGT GCCTGGCCTTCCGAAACTAAAAGAGTGGGTGGGAAGACTAGTGAAACCCAGTTCACGGATGGGGAAACAGGCCTG AGGTCACATTTCACTTAGTGGTTGTGTTGGGACCAAAACCTGGGTGTCCTCACTGCTGAGTCCAGCCATGGTTTT CAGGGGGACAGTGGACAGGACTCAGAAATGTGGTGGGAGGGCCTCCCTGGCTTGGGAGACCGCTCTCTGCAAGG GAGGGGGAGAGCAGAGGGAGAGAGGAGAGGTGACACGGATGGAAGAGTGGGAAGGAGCTGGCCTGGCTCAGCCC TAGGCTGTCCCTGCAGCCAGGGTGTCCGGGGGCTGGCCAGTCAGAGAAAGGGGGCCCATGGACTGCTGTGGCAAAT AGGGAGACAAGGAGACACTGCAGTCCTACTACAGTCTGGAGTGGGGTCCTAAGAAGAAGGGTCCCACCTCA ACCCCTGTCAGTGTCCACTGTGGGGTGGGGGCTGACCCCTGCCTTTGATTGTCATTCTCCTGGGAAGCCCAGTCT CAAATAAATCACATTTTATCTTATATTTAGGGAAAGCCGGAGAGCAACAAAAAAATGTTTAAGCCGGGCGCGG TGGCTCACATCTGTAATCCCAGCACTTTGGGAGTCCAAGGAGGGGGATCGCTTGAGTCCAGGAGTTTGAGACCAG TCCCAGCTACTTGGGAGGCTGAGGCAGGAGGATCACTTAAGCCCAGAAGGCAGAGGTTGTAGTGAGCTGAGATCG TCAAATTCTTTCTTTTTCCACAGAAAAAAAAA

 ${\tt MSVDPLSSKALKIKRELSENTPHLSDEALMGLSVRELNRHLRGLSAEEVTRLKQRRRTLKNRGYAASCRVKRVCQKEELQKQKSELEREVDKLARENAAMRLELDALRGKCEALQGFARSVAAARGPATLVAPASVITIVKSTPGSGSGPAHGPDPAHGPASCS}$

CGCAGACGCCGCCACGCCATGGGCTCCTGAGGCTAGCTTGTCACTTTCTGCAAAGGTTTCCCTCAGGGAGCCTC CTGCTGCCAGGCACCATGACAGTGAGGGGGGATGTGCTGGCCCGGATCCAGCGTCGCCCACGACCGCAGCAGCC ${ t TCGCCCAGCGTCTCCGTGATCCCCGAGGGCAGCCCCACTGCC} { t ATG} { t GAGCAGCCTGTGTTCCTGATGACAACTGCC}$ GCTCAGGCCATCTCTGGCTTCTTCGTGTGGACGGCCCTGCTCATCACATGCCACCAGATCTACATGCACCTGCGC TGCTACAGCTGCCCCAACGAGCAGCGCTACATCGTGCGCATCCTCTTCATCGTGCCCATCTACGCCTTTGACTCC TGGCTCAGCCTCCTCTTCTCACCAACGACCAGTACTACGTGTACTTCGGCACCGTCCGCGACTGCTATGAGGCC TTGGTCATCTATAATTTCCTGAGCCTGTGCTATGAGTACCTAGGAGGAGAAAGTTCCATCATGTCGGAGATCAGA GGAAAACCCATTGAGTCCAGCTGTATGTATGGCACCTGCTGCCTCTGGGGAAAGACTTATTCCATCGGATTTCTG AGGTTCTGCAAACAGGCCACCCTGCAGTTCTGTGTGGTGAAGCCACTCATGGCGGTCAGCACTGTGGTCCTCCAG GCCTTCGGCAAGTACCGGGATGGGGACTTTGACGTCACCAGTGGCTACCTCTACGTGACCATCATCTACAACATC TCCGTCAGCCTGGCCCTCTACGCCCTCTTCCTCTTCTACTTCGCCACCCGGGAGCTGCTCAGCCCCTACAGCCCC AAGTGTGGGGCCATCCCCAAAATCCACTCGGCCCGCGTGTCGGTGGGCGAGGGCACCGTGGCTGCCGGCTACCAG GACTTCATCATCTGTGTGGAGATGTTCTTTGCAGCCCTGGGCCCTGCGGCACGCCTTCACCTACAAGGTCTATGCT GACAAGAGGCTGGACGCACAAGGCCGCTGTGCCCCCATGAAGAGCATCTCCAGCAGCCTCAAGGAGACCATGAAC CCGCACGACATCGTGCAGGACGCCATCCACAACTTCTCACCTGCCTACCAGCAGTACACGCAGCAGTCCACCCTG GAGCCTGGGCCCACCTGGCGTGGTGGCGCCCACGGCCTCTCCCGCTCCCACAGCCTCAGTGGCGCCCGCGACAAC GAGAAGACTCTCCTGCTCAGCTCTGATGATGAATTC<u>TAG</u>GTGCGGGCTGCAGTGGCGGAAGTGCTGGCGCCATAG CCACGGTCAGGCTGTGCCCCACCTCCAGCCTCACCACCAGGCCAGGAGGCAGCTGGCACAGTGCTCACGCCGCCT TTATTTATTGGACCAGAAACACTCACATGTCACTTCCAGAGGAACGGGGGACAGCCAGGCTCGCCCATGGGCCTT CAGGAATATTTATACATGGCCCAGCCTGCACTGCCCGGGCGAGGGCAGAGGACACTGGGAGCAAGGCTTATGCCC GCTGCAGCCTTCTAGCCCCTCCTCCCCGCGAGACTCTCAGGCTGAGGTCGGCAAGCCGTGGCTCCCCCACACACC TCTGTTGAAGCAGGGGCTTCTGGGCCCCTGGGTATCCCCACCTGTCGTGGCCACACCTCTGCCTCATGCCC GCAGAGCCCTTGCTTCCTGGCTGCTTCAGGGCTCAGGGGCTCCCAGCCCTCCTTCCCAGGCTGATGCTGGGTCCT CTCTCTCTTTGGGGCTTCTCCCTCCCGTTTCAGGGGAAAGGTCTGAGTCTCCACGTTTCAGACCAGCTTCTGGGG GAAGGCAGTCCGGCAGGGAGACCGGGAGGGGTGGCCACACAGTGGGGAGCTGGGAGGTGGGGGGAATGGTCCCAG ACTCCTCTCGGGGCCCCTATCCACACAGGGCCTGGTGTTCTACCCCATCTGGCCCCTGGCCCATCTCTTCTGTGC CTTAGTCACATATGAAAGCGCCCCTCCCTGGCTCCCCATCTGTCCCACACGCTCCCTGGGGCTCTTAGTTCAGCT GCTGGCACTCGCAGGATCCTGCAGTGCTGGGCCCAGAGCCCTTGGACAGGCCTCAGGAGTGGTCAGGACCACCAA GCCCCTCCTCCCCCCCCACACCTCTAGACCTGGGGCCTCCGGAACCCCCAGCAGGCTGGGCTTATACTAGCTC CTGACTTAGGAAGAGCCTCGTGTCACAACACGTGTCCCTACAGGCAAAGTGTCCTGGCATTTAAAACCCAGATTA GTCTTCCTGGCCTCCTTCCTTCCTCGTGGCAGAGGCCTGCATGTGGGTGCCAGAGGCCAGCTCTCCCCCTCCAT CCCTGCCCGCCATCTGCTTTCACCAAGCTGTCTCTCCACCGTGGCTTCCCCTTCTCCCAGGCCAAAGTGCTG CTGATTCCCACTCCCTTGGTTTTCGCCTGCCCAGCGTTGCTGTTTGCGTGGAGGGTGGGGGGGAGCTCAGTGGCAG GGAATCAGCGGTCCGTGGGGTCGTGGGGACGGGAACATGTGCCCGACCGCTCCATCCCTCCTCCTCCTTAGGAT GAAAAATTAATTGTATGATGTATGAGAAGACAGAGTCTCCTAGTTTTGTATCTTGTTGTATGACTGCCATGAGTT CCACCAGAAAGCCACTCTATTTTGGTCCCTGTGACATTTTAAATGCGTGACAGAAGTGAGCAAATAAAGTGAGGA

 $\label{thm:conequation} $$ \begin{aligned} $$ MEQPVFLMTTAAQAISGFFVWTALLITCHQIYMHLRCYSCPNEQRYIVRILFIVPIYAFDSWLSLLFFTNDQYYV $$ YFGTVRDCYEALVIYNFLSLCYEYLGGESSIMSEIRGKPIESSCMYGTCCLWGKTYSIGFLRFCKQATLQFCVVK $$ PLMAVSTVVLQAFGKYRDGDFDVTSGYLYVTIIYNISVSLALYALFLFYFATRELLSPYSPVLKFFMVKSVIFLS $$ FWQGMLLAILEKCGAIPKIHSARVSVGEGTVAAGYQDFIICVEMFFAALALRHAFTYKVYADKRLDAQGRCAPMK $$$ SISSSLKETMNPHDIVQDAIHNFSPAYQQYTQQSTLEPGPTWRGGAHGLSRSHSLSGARDNEKTLLLSSDDEF$

CAAGGTAACTCTGGGCTACAGAGTCCTTGCTGGGGGTTCGGGGAGCGCTTGGACCCCGGCTTCTGGGACGCGTCA ${\tt GGAGAAGGGAGCACTGGCTTTGCTTTCATCAGGCCAAAG} \underline{{\tt ATG}} {\tt CCTTTCTTTGGGAATACGTTCAGTCCGAAGAAG}$ TTGGAATACGGATCCCCGACTATGAACCTGGCAGGGCAAAGCCTGAAGTTTGAAAATGGCCAGTGGATAGCAGAG ACAGGGGTTAGTGGCGGTGTGGACCGGAGGGAGGTTCAGCGCCTTCGCAGGCGGAACCAGCAGTTGGAGGAAGAG AACAATCTCTTGCGGCTGAAAGTGGACATCTTATTAGACATGCTTTCAGAGTCCACTGCTGAATCCCACTTAATG ${\tt GAGAAGGAACTGGATGAACTGAGGATCAGCCGGAAGAGAAAA} \underline{{\tt TGA}} {\tt AGACCCCAGAGACATTTATTGGGGAGTAGG}$ ATGTGGCTGAGTGCTTTTTTTTTGGCCAGACTAGCGGATTCAGTCCTGGAAGAGAGTATCATATAATGAGACCCA CAGGCACTGGCACCCTTGGGTTGGCAATAGAAGGTGACATGGAATGGAGAAAACCAAGATTCCAGATGGGGATAG TAACTAGAAGGTGCTTCAGATGCACTGCCTGCGGGTGCCAGTCTGAAAACCAGACCGCACAGAGGCCTGGGGCTG TTGGGAGAGCGGCTGGAGTTCATTCTCTCACCCCCTTATGTTGGTGTTTTGGCGTGTGACAGCAGTTCTACAGAG TCCTCCTTCCTCACACCTGGCCTCCTCTGGCTTCAGCTTCTCAGCAGCACCAGCCTTCCACAACAACACTA

6561/6881 FIGURE 6057 -

 ${\tt MPFFGNTFSPKKTPPRKSASLSNLHSLDRSTREVELGLEYGSPTMNLAGQSLKFENGQWIAETGVSGGVDRREVQ} \\ {\tt RLRRRNQQLEEENNLLRLKVDILLDMLSESTAESHLMEKELDELRISRKRK} \\$

 ${\tt MAAAVAAAGAGEPQSPDELLPKGDAEKPEEELEEDDDEELDETLSERLWGLTEMFPERVRSAAGATFDLSLFVAQKMYRFSRAALWIGTTSFMILVLPVVFETEKLQMEQQQQLQQRQILLGPNTGLSGGMPGALPSLPGKI}$

WO 2004/030615 PCT/US2003/028547

6564/6881 FIGURE 6060

ACTTTAAAGAGGGCTGCTCAACTGCAAGGACGCTGTAAGCAGGAAGAGAAGCCACAGCGCTTCAGAAAAGAGTGG GACAGGGACAAGCATATCTAAGAGGCTGAACATGAATCCACAGATCAGAAACCCGATGAAGGCAATGTATCCAGG CACATTCTACTTCCAATTTAAAAACCTATGGGAAGCCAACGATCGGAACGAAACTTGGCTGCTTCACCGTGGA AGGTATAAAGCGCCGCTCAGTTGTCTCCTGGAAGACGGGCGTCTTCCGAAACCAGGTGGATTCTGAGACCCATTG TCATGCAGAAAGGTGCTTCCTCTTTGGTTCTGCGACGACATACTGTCTCCTAACACAAAGTACCAGGTCACCTG GTACACATCTTGGAGCCCTTGCCCAGACTGTGCAGGGGAGGTGGCCGAGTTCCTGGCCAGGCACAGCAACGTGAA TCTCACCATCTTCACCGCCCGCCTCTACTACTTCCAGTATCCATGTTACCAGGAGGGGCTCCGCAGCCTGAGTCA GGAAGGGGTCGCTGTGGAGATCATGGACTATGAAGATTTTAAATATTGTTGGGAAAACTTTGTGTACAATGATAA TGAGCCATTCAAGCCTTGGAAGGGATTAAAAACCAACTTTCGACTTCTGAAAAGAAGGCTACGGGAGAGTCTCCA GTGAGGGGTCTCCCTGGGCCTCATGGTCTGCTCTCTAGCCTCCTGCTCATGCTGCACGGGCCTCCCCTCCACC CTGGACCCGCTCTGTTTCTGCCTGGTCATCCTGAGCCCCTCCTGGCCTCAGGGCCATTCCACAGTGCTCCCCTGC CCCACAGACCCCGTTCCTCCAGCCTGCGTGCCCCTAACCTGGCTTTTCCCATCTCCCCAGCATAACCAAATCTTA $\tt CTAAACTCATCCTAGGCTGGGCATGGTGACTCACGCCTGTAATCCCCCAGCAATTTGGGAGGCAAAGGTGGGAGA$ AAAAAAAAAAAAAG

TGCCTCGGAAGCGCAGCAGCAGCATCGTGGGAAGGTGAAGACTTCCCTAAGGATGACCCGTCCAAGCCGGTCC ACCTCACAGCCTTCCTGGGATACAAGGCTGGCATGACTCACATCGTGCGGGAAGTCGACAGGCCGGGATCCAAGG TGAACAAGAAGGAGGTGGTGGAGGCTGTGACCATTGTAGAGACACCACCCATGGTGGTTGTGGGCATTGTGGGCT ACGTGGAAACCCCTCGAGGCCTCCGGACCTTCAAGACTGTCTTTGCTGAGCACATCAGTGATGAATGCAAGAGGC GTTTCTATAAGAATTGGCATAAATCTAAGAAGAAGGCCTTTACCAAGTACTGCAAGAAATGGCAGGATGAGGATG GCAAGAAGCAGCTGGAGAAGGACTTCAGCAGCATGAAGAAGTACTGCCAAGTCATCCGTGTCATTGCCCACACCC AGATGCGCCTGCTTCCTCTGCGCCAGAAGAAGGCCCACCTGATGGAGATCCAGGTGAACGGAGGCACTGTGGCCG AGAAGCTGGACTGGGCCCGCGAGAGGCTTGAGCAGCAGGTACCTGTGAACCAAGTGTTTGGGCAGGATGAGATGA ${\tt TCGACGTCATCGGGGTGACCAAGGGCAAAGGCTACAAAGGGGTCACCAGTCGTTGGCACACCAAGAAGCTGCCCC}$ CACGCGCTGGGCAGAAAGGCTACCATCACCGCACTGAGATCAACAAGAAGATTTATAAGATTGGCCAGGGCTACC TTATCAAGGACGGCAAGCTGATCAAGAACAATGCCTCCACTGACTATGACCTATCTGACAAGAGCATCAACCCTC TGGGTGGCTTTGTCCACTATGGTGAAGTGACCAATGACTTTGTCATGCTGAAAGGCTGTGTGGTGGGAACCAAGA AGCGGGTGCTCACCCTCCGCAAGTCCTTGCTGGTGCAGACGAAGCGGCGGGCTCTGGAGAAGATTGACCTTAAGT TCATTGACACCACCTCCAAGTTTGGCCATGGCCGCTTCCAGACCATGGAGGAGAAGAAGCATTCATGGGACCAC AAAAGTTATTTTCCACTGAAAAAAAAAAAAAAAAAAA

MSHRKFSAPRHGSLGFLPRKRSSRHRGKVKSFPKDDPSKPVHLTAFLGYKAGMTHIVREVDRPGSKVNKKEVVEA VTIVETPPMVVVGIVGYVETPRGLRTFKTVFAEHISDECKRRFYKNWHKSKKKAFTKYCKKWQDEDGKKQLEKDF SSMKKYCQVIRVIAHTQMRLLPLRQKKAHLMEIQVNGGTVAEKLDWARERLEQQVPVNQVFGQDEMIDVIGVTKG KGYKGVTSRWHTKKLPRKTHRGLRKVACIGAWHPARVAFSVARAGQKGYHHRTEINKKIYKIGQGYLIKDGKLIK NNASTDYDLSDKSINPLGGFVHYGEVTNDFVMLKGCVVGTKKRVLTLRKSLLVQTKRRALEKIDLKFIDTTSKFG HGRFQTMEEKKAFMGPLKKDRIAKEEGA

i

CTGAGAGCCACCGCCAGAGGACAGCTGGCTCAAGTTCAGGAGTGAGAACAACTGCTTCCTGTATGGGGTCTTCA ACGGCTATGATGGCAACCGAGTGACCAACTTCGTGGCCCAGCGGCTGTCCGCAGAGCTCCTGCTGGGCCAGCTGAC ATGCCGAGCACGCCGAGGCCGATGTGCGGCGTGTGCTGCAGGCCTTCGATGTGGTGGAGAGGAGCTTCCTGG AGTCCATTGACGACGCCTTGGCTGAGAAGGCAAGCCTCCAGTCGCAATTGCCAGAGGGAGTCCCTCAGCACCAGC TGCCTCCTCAGTATCAGAAGATCCTTGAGAGAGCTCAAGACGTTAGAGAGGGAAATTTCGGGAGGGGCCATGGCCG TTGTGGCGGTCCTTCTCAACAACAAGCTCTACGTCGCCAATGTCGGTACAAACCGTGCACTTTTATGCAAATCGA CGCAGCTGGGCTTGGATGCTGGAAAGATCAAGCAGGTGGGGATCATCTGTGGGCAGGAGAGCACCCGGCGGATCG GGGATTACAAGGTTAAATATGGCTACACGGACATTGACCTTCTCAGCGCTGCCAAGTCCAAACCAATCATCGCAG AGCCAGAAATCCATGGGGCACAGCCGCTGGATGGGGTGACGGGCTTCTTGGTGCTGATGTCGGAGGGGTTGTACA AGGCCCTAGAGGCAGCCCATGGGCCTGGGCAGGCCAACCAGGAGATTGCTGCGATGATTGACACTGAGTTTGCCA GTGGTGGGGAGCGTGCCAGGTTCTGCCCCCGGCACGAGGACATGACCCTGCTAGTGAGGAACTTTGGCTACCCGC TGGGCGAAATGAGCCAGCCCACACCGAGCCCAGCCCCAGCTGCAGGAGGACGAGTGTACCCTGTGTCTGTGCCAT ACTCCAGCGCCCAGAGCACCAGCAGACCAGCGTGACCCTCTCCCTTGTCATGCCCTCCCAGGGCCAGATGGTCA CGCTCCCGCCTGGCGAGGACGGTCGTGTTGAGCCCTATGTGGACTTTGCTGAGTTTTACCGCCTCTGGAGCGTGG ACCATGGCGAGCAGAGCGTGGTGACAGCACCGTAGGGCAGCCGGAGAATGCAGCCCAAGCAGGGCCTGGCATGGG GCAGGACAGGGTCCAGCCTTTTCCTAACATCTGCCTGTGCCACAACGGCCAGCAGGTGCCCCATCCTCTGCCCAC AGCAGACTCTGTCCCATGGCTCTCCGGGCAGTAGAGTGTGTGAGTGCAGACTGGACCTGTGGTTCATACCTTGTC ACCACCGGGAAGCTGAAGGCCACTTCCTCCCAGATGGCCTCAGCCAGGACCATCGCCCTTTCTCAGAGCAGAGG GCCAGGTATAGAAACCGCAGTGGGCCTGCAAGCCGCCCGAGCCTCCCCAGCAGCCTCCTACAGAGCAGGAAGAGAG $\tt CGCCCTGTGAACCCTGAGTGTTGCAGGCCCAGCAGACCCTGCTGTCCCAAGCCCACCCTCCTCCCACCATCACC$ TCCCTCACCTCGGGACAGTAGCCCTCCACTTCTCCAGCCTCTCAGCCCTGTGCTCCTGCATCCAGAGTGGAACCC AGGCTGGTGTCCGCATCTGTCCCTGGGCCCCACCCCTGGACCTGCCTTGGTTGTCATCTGTTGTAAACGTTCA GGAGGACCAGGCAGCATCTGGGGCCTGGGATGGCCACAGAAGGGGCCAGGCCAGGTGGAAAGGAGCCAGGGGGAA GTGGTCTAAGAGACCTGGAACTGCCAGAGGATGGCGGCCTGGGCTTCCCCAGAGCCAGGCGTGCGGGAGAGGTGA AAATGGTTCCAGGAGGGAAGAGGTTCTTTGAGACACAGTACCCTGGGAGGCATAGGAGAAGGGTCGGGCCAGCCC AGCCCAGGGCCTGAGTTAGACTATTTCCCACATGTTCTCTGCCTTCAGTGGGGAGGGGGTGCCACCAGGGCTGTC GGCCAGGATTGCCACTCTGTTTCAGAGGAAGCAGGCCGAGAGACTTGCACCTTGGCCAAGCCACAATCAGTG GGGCAGCCAGAGCTCAGACCTGAGCCATTTTGTCAGTATCCAGGACCCCCGGATTCTCCACGCCCTCCCCATCT CCCAGTCTCCCTGCCCCCATGCCCCAGACCGGCCCACCAGGGACTAGCCGCTGTCGCACAGCCTCTGGGGTGCT TGGTCTCTGCGAAGTCAAAGGCCTGACAGCTCTGTGGCCTGGGAATCCATTTTCCTGCGGCAGAGCAGGGCCTGG TGTGGAACCAGGGAGCTGTGGGAAGCCACAGCAGAAATGGAAGAAAAACAGGTCTCAGCCCAGGGTCCTCGCTCA **AACAAAAGGAATTC**

TGATGGGTGACCCGGGGAGAGGTACCCGGCCAGAGGCGAGTCCTGCGGAGTGGTAGCGCGCACGGCCTGCGGTGT GACACCCAGCCCTGCCAGTCCCCCATGGCCCCGTGGAGCCGAGAGGCGGTGCTGAGTCTCTATCGGGCTCTGTT GCGCCAGGGCCGACAGCTTCGCTACACTGATCGAGACTTCTACTTTGCCTCCATCCGCCGTGAATTCCGAAAAAA TCAGAAGCTAGAGGACGCTGAGGCCCGGGAGAGGCAGCTGGAGAAGGGCCTGGTCTTTCTCAACGGCAAATTGGG GAGGATCATTTAGGATCCTCCAAGGGAAAGAGGACAAAGGTGCCTTCTGTAGACACTCCTGCTCTTCCATCCC CATCTTACAGATGTATTAAGAAGCCTCAGATGAGCAATGGCAGGCGCTGGTGAGCGCAAAGGCAAGAAGGATGAC CTGGGCATCGCCACGCTGGCAGTTAAGCGGATGTACGATCGGGCGATCAGTGCCCCTACCAGCCCCACCCGCCTG AGCCATTCGGGGAAAAGGAGCTGGGAAGAACCCAACTGGATGGGCTCCCCACGACTGCTGAACAGGGACATGAAG CGGCCCAAGCCAGTGGCCAGGAAGGGCCAGGTAGACTTGAAGAAGTCACGACTCCGCATGTCCCTGCAGGAGAAA ATATGTGCCGAGCTCCGGAGCTTCCTGCGGGCCAAGTTGCCTGACATGCCGCTTCGGGACATGTACTTGAGTGGC AGCCTCTACGATGACCTGCAGGTGGTGACAGCTGACCACATCCAACTCATTGTGCCCCTTGTGCTGGAGCAGAAC CTGTGGTCATGTATTCCTGGTGAAGACACCATCATGAATGTCCCTGGCTTCTTCCTGGTGCGTCGTGAGAATCCA GAGTACTTTCCTCGTGGGAGCAGTTACTGGGACCGCTGTGTAGTAGGGGGGCTACCTCTCCCAAAGACAGTCGCA CCGGCCCCACCCCCAGAAGCCCTCACACTGGAGGTGCAGTATGAGCGTGACAAACATCTCTTCATTGACTTCCTG CCATCAGTGACCCTCGGTGACACAGTCTTGGTGGCCAAACCACACCGGCTAGCCCAGTATGACAACCTGTGGCGG ATCCTCCACTTGGCCCAGGAGGAGGCTGACTGGTCTCCGGATATGCTGGCCGACCGTTTCCTGCAGGCCTTGAGG GGACTTATCAGCTACTTAGAGGCTGGAGTCCTGCCCAGTGCCCTAAACCCCAAGGACAAGGCCTTGAAGGAACGC AGCCTTAGACATCAGGTGAGGATGATGGAGGTAGACAGTCGACTGAATGTCAGCTGGAAAATCCAGTCACTAGTT GGGGTTTGGTGGCCATGTTTTCTACCCAGACAGGCCCTGCTTTTCTAGGATGTGGCCTTAGAGCAAGAACAGACC CAACAGCCAGCCTTCATCCTCCAGCGTCTGCCATAGGAATGTGAGAGGGGTGTTTGCTGAGCGCTCCGGGCACG GCCAGAGGGCAAGTGAGCATGCACGGACCTCTTCCCCCTGTCCTGTTTCTCACCCAGCACCTGGGGAGATCGGTG CTGCTGAGATTGCAGTATTTATTGCAATGTAAATGTATCCTGAAGGTGGGGAGGAATGTTTAATCTACCATGTCC GTGTGTC

GAAAACTCAGGCTTGGAACAGCACCTCGCGCGATAACCTGGCGTCCTCGGCCTTCACAATAAAAACTCTTCGCCG GAAAACGACCTTTCCCCGCCCACTGCGCTGACACCGGAAGCGAGGCGTGTCTGGGAGATCACTCCGCGCTCCGGC GGCGAAGGAAAGAACGGACTCTGATCATAGAAGCCTAGTAAAGTAGTACACCTCTCTCCTTTCGTGAGGCCATAA AGCGGGCGGAGGAGACGGTCACGTGGTCGCGGCGGAAGGATGCGTCTGTGCTGCGTCCCCATAGAGACGAAGTC TGCGTTTTCCCTCCCCCCCCCCCCAGGGTCCACGGCCACCATGGCGTATTAGGGGCAGCAGTGCCTGCGGCAGC ATTGGCCTTTGCAGCGGCGGCAGCAGCACCAGGCTCTGCAGCGGCAACCCCCAGCGGCTTAAGCCATGGCCAGCG TTGCTGTAACCGACAAAGACACCTTCGAATTAAGCACATTCCTCGATTCCAGCAAAGCACCGCAACATGACCGAA ATGAGCTTCCTGAGCAGCGAGGTGTTGGTGGGGGACTTGATGTCCCCCTTCGACCAGTCGGGTTTGGGGGCTGAA GAAAGCCTAGGTCTCTTAGATGATTACCTGGAGGTGGCCAAGCACTTCAAACCTCATGGGTTCTCCAGCGACAAG GCTAAGGCGGGCTCCTCCGAATGGCTGGCTGTGGATGGGTTGGTCAGTCCCTCCAACAACAGCAAGGAGGATGCC TTCTCCGGGACAGATTGGATGTTGGAGAAAATGGATTTGAAGGAGTTCGACTTGGATGCCCTGTTGGGTATAGAT GACCTGGAAACCATGCCAGATGACCTTCTGACCACGTTGGATGACACTTGTGATCTCTTTGCCCCCCTAGTCCAG GAGACTAATAAGCAGCCCCCCAGACGGTGAACCCAATTGGCCATCTCCCAGAAAGTTTAACAAAACCCGACCAG GTTGCCCCCTTCACCTTCTTACAACCTCTTCCCCTTTCCCCAGGGGTCCTGTCCTCCACTCCAGATCATTCCTTT AGTTTAGAGCTGGGCAGTGAAGTGGATATCACTGAAGGAGATAGGAAGCCAGACTACACTGCTTACGTTGCCATG ATCCCTCAGTGCATAAAGGAGGAAGACACCCCTTCAGATAATGATAGTGGCATCTGTATGAGCCCAGAGTCCTAT CTGGGGTCTCCTCAGCACAGCCCCTCTACCAGGGGCTCTCCAAATAGGAGCCTCCCATCTCCAGGTGTTCTCTGT GGGTCTGCCCGTCCCAAACCTTACGATCCTCCTGGAGAGAAGATGGTAGCAGCAAAAGTAAAGGGTGAGAAACTG GAGGCTCTTACTGGTGAGTGCAAAGAGCTGGAAAAGAAGAACGAGGCTCTAAAAGAGAGGGCGGATTCCCTGGCC AAGGAGATCCAGTACCTGAAAGATTTGATAGAAGAGGTCCGCAAGGCAAGGGGGAAGAAAAGGGTCCCCTAGTTG AGGATAGTCAGGAGCGTCAATGTGCTTGTACATAGAGTGCTGTAGCTGTGTTCCAATAAATTATTTTGTAGGG AAAGT

MSASADVLALAKIEIKLSDIPEGKNMAFKWRGKPLFVRHRTQKEIKQEAAVELSQLRDPQHDLDRVKKPEWVILI GVCTHLGCVPIANAGDFGGYYCPCHGSHYDASGRIRLGPATLNLEVPTYEFTSDDMVIVG

CCAGCAGACATTGGGTTTGCCTATCACAGATGAACAAATCCAGGAGATGAAATCAAACCTGGAGAACATAGACTTCA AGATGGCAGCTGAGGAAGAGAAACGTTTACGACATGATGTGATGGCTCACGTGCACACATTTGGCCACTGCTGTC CAAAAGCTGCAGGCATTATTCACCTTGGTGCTACTTCTTGCTATGTTGGAGACAATACTGACTTGATTATTCTTA GAAATGCACTTGACCTGCTTTTGCCAAAGCTTGCCAGAGTGATCTCTCGGCTTGCCGACTTTGCTAAGGAACGAG CCAGTCTACCCACATTAGGTTTCACACATTTCCAGCCTGCACAGCTGACCACAGTTGGGAAACGTTGCTGTCTTT GGATTCAGGATCTTTGCATGGATCTCCAGAACTTGAAGCGTGTCCGAGATGACCTGCGCTTCCGGGGAGTAAAGG GTACCACTGGCACTCAGGCCAGTTTCCTGCAGCTCTTTGAGGGAGATGACCATAAGGTAGAGCAGCTTGACAAGA TGGTGACAGAAAAGGCAGGATTTAAGAGAGCTTTCATCATCACAGGGCAGACATATACACGAAAAGTGGATATTG AAGTACTGTCTGTGCTGGCTAGCTTGGGGGCATCAGTGCACAAGATTTGCACCGACATACGCCTCCTGGCAAACC TCAAGGAGATGGAGGAACCCTTTGAAAAACAGCAGATTGGCTCAAGTGCGATGCCATATAAGCGGAATCCCATGC AGTGGTTTGAACGCACACTGGATGATAGTGCCAACCGACGGATCTGTTTGGCCGAGGCATTTCTTACCGCAGATA CTATATTGAATACGCTGCAGAACATTTCTGAAGGATTGGTCGTGTACCCCAAAGTAATTGAACGGCGCATTCGGC ${\tt AAGAGCTGCCTTTCATGGCCACAGAGAACATCATCATGGCCATGGTCAAAGCTGGAGGTAGCCGCCAGGATTGCC}$ ATGAGAAAATCAGAGTGCTTTCTCAGCAGGCAGCTTCTGTGGTTAAGCAGGAAGGGGGTGACAATGACCTCATAG AGCGTATCCAGGTTGATGCCTACTTCAGTCCCATTCACTCCCAGTTGGATCATTTACTGGATCCTTCTTTCA ${\tt TGATGAAGGTGAAAGCAGAATTATGTCTG} \underline{{\tt TAG}} {\tt AGTTGGAAGAGAATTAAACGAAAATCATTGTTAATTGCTGAGG}$ CATGAAAATTGTGTTACTATAACGCCTTATTTTACCTCGAGAATTGTTACCTTAAATTAGTACAGCACTTTCTTC TTCCCATGGTGCTTTCCTGTTTCTCAGTCTCACATTTCTCAACAAGGCAAAAACAAAGAGCGTTGAAGTTGACTC

MAAGGDHGSPDSYRSPLASRYASPEMCFVFSDRYKFRTWRQLWLWLAEAEQTLGLPITDEQIQEMKSNLENIDFK
MAAEEEKRLRHDVMAHVHTFGHCCPKAAGIIHLGATSCYVGDNTDLIILRNALDLLLPKLARVISRLADFAKERA
SLPTLGFTHFQPAQLTTVGKRCCLWIQDLCMDLQNLKRVRDDLRFRGVKGTTGTQASFLQLFEGDDHKVEQLDKM
VTEKAGFKRAFIITGQTYTRKVDIEVLSVLASLGASVHKICTDIRLLANLKEMEEPFEKQQIGSSAMPYKRNPMR
SERCCSLARHLMTLVMDPLQTASVQWFERTLDDSANRRICLAEAFLTADTILNTLQNISEGLVVYPKVIERRIRQ
ELPFMATENIIMAMVKAGGSRQDCHEKIRVLSQQAASVVKQEGGDNDLIERIQVDAYFSPIHSQLDHLLDPSSFT
GRASQQVQRFLEEEVYPLLKPYESVMKVKAELCL

GGGTGGGAGGCCAGCGGCCGGGGAGGTTCTAGTCTGTTCTGTCTTGCGGCAGCCGCCCCTTCTGCGCGGTCA CCCGCAAAGTGAACGAGCTTCGGGCCTTTGTGAAAATGTGTAAGCAGGATCCGAGCGTTCTGCACACCGAGGAAA TGCGCTTCCTGAGGGAGTGGGTGGAGAGCATGGGTGGTAAAGTACCACCTGCTACTCAGAAAGCTAAATCAGAAG AAAATACCAAGGAAGAAAAACCTGATAGTAAGAAGGTGGAGGAAGACTTAAAGGCAGACGAACCATCAAGTGAGG AAAGTGATCTAGAAATTGATAAAGAAGGTGTGATTGAACCAGACACTGATGCTCCTCAAGAAATGGGAGATGAAA ATGCGGAGATAACGGAGGAGATGATGGATCAGGCAAATGATAAAAAAGTGGCTGCTATTGAAGCCCTAAATGATG GTGAACTCCAGAAAGCCATTGACTTATTCACAGATGCCATCAAGCTGAATCCTCGCTTGGCCATTTTGTATGCCA AGAGGGCCAGTGTCTTCGTCAAATTACAGAAGCCAAATGCTGCCATCCGAGACTGTGACAGAGCCATTGAAATAA ATCCTGATTCAGCTCAGCCTTACAAGTGGCGGGGGAAAGCACACAGACTTCTAGGCCACTGGGAAGAAGCAGCCC ATGATCTTGCCCTTGCCTGTAAATTGGATTATGATGAAGATGCTAGTGCAATGCTGAAAGAAGTTCAACCTAGGG ATGGCTCTTTTCCAGGTGGCTTTCCTGGGGGAATGCCTGGTAATTTTCCCGGAGGAATGCCTGGAATGGGAGGGG GCATGCCTGGAATGGCTGGAATGCCTGGACTCAATGAAATTCTTAGTGATCCAGAGGTTCTTGCAGCCATGCAGG ATCCAGAAGTTATGGTGGCTTTCCAGGATGTGGCTCAGAACCCAGCAAATATGTCAAAATACCAGAGCAACCCAA AGGTTATGAATCTCATCAGTAAATTGTCAGCCAAATTTGGAGGTCAAGCG<u>TAA</u>TGTCCTTCTGATAAATAAAGCC CTTGCTGAAGGAAAAGCAACCTAGATCACCTTATGGATGTCGCAATAATACAAACCAGTGTACCTCTGACCTTCT CATCAAGAGAGCTGGGGTGCTTTGAAGATAATCCCTACCCCTCTCCCCCAAATGCAGCTGAAGCATTTTACAGTG GTTTGCCATTAGGGTATTCATTCAGATAATGTTTTCCTACTAGGAATTACAAACTTTAAACACTTTTAAATCTT CAAAATATTTAAAACAAATTTAAAGGGCCTGTTAATTCTTATATTTTTCTTTACTAATCATTTTGGATTTTTTTC TTTGAATTATTGGCAGGGAATATACTTATGTATGGAAGATTACTGCTCTGAGTGAAATAAAAGTTATTAGTGCGA GGCAAACATAACTCATTTGAGGATAAAGTTTGTGTTGGATATGTGGTTCCTGATGCATTTTGACTTGTCTTTTTA AATGCTTTATCTTTTAAAGATTTATTTCAATAAAACTAATTGGGACCACCCGTATTTCAGTAGGACCTGG GTAGGGATTGGAAGTACTTGGCAGGGCAGCAATCTTGCTGTTTTGATATAACATGCATCCTTGGGCAGGTT TTGTTGTCCAGTATATCTAATAAGTGTTTTTCATATTATTTCCACGTAAGGGAAATAAGGTAGTACTTTTCTTTT TTGTCTCCCTTACTTTCTTGAGCTAAAGACAGGCTTTTTCCACCGGCATCATCACTGCTATCATTAACAGC CAACAACTGTAGTTTCTTACTTGGCCAAGAGAATGCTTATTTAAGTGTTAGACTTCCATTCTGGCAAAATCTTGC CTTATCAGAAGACATTGGAAAGAGGGATTCCCTTTGGTGTTTTGGTCTTCTACTTAGAAAAACCTATTGCAGTTAG TTTATCTTGTAGTATTCATCTTTGTATTCTGAAGATAAGGTTTGAATTAAATTGATACACACAGAGGGGAACCGA TTTTTTTTTTTTCCAATGTGAATTATAAATGAGATAATCCACAGTTATTCATTGTGGAGTTGTTGAGACTATGAAAG CCAATGATAAAGAAAATGATAAATTTTCTGTTGTGCATTCAATTCTTATTTTAAATAAGACTAAGTATAGGCATT GTACCTGACATTGCTACGTTTTCTACCAGTGTTTCAATTTAAAGTGCTAGTGTTTAAAAACATTTTCAAGGGATAA GGCCTTCTGTACTTGCTTATTTGAAGAATCAGTGGTAGGAGCAGTGAAGTAAATTCTATGGAGTACATTTCTAA CATCTGTTACATAAATGAGAAAAAGCTATTATGCTGATGGAGCATGCTTTTTAAATCCTTTAAAAACACTCACCA TATAAACTTGCATTTGAGCTTGTGTTCTTTTGTTAATGTGTAGAGTTCTCCTTTCTCGAAATTGCCAGTGTGT

MDPRKVNELRAFVKMCKQDPSVLHTEEMRFLREWVESMGGKVPPATQKAKSEENTKEEKPDSKKVEEDLKADEPS SEESDLEIDKEGVIEPDTDAPQEMGDENAEITEEMMDQANDKKVAAIEALNDGELQKAIDLFTDAIKLNPRLAIL YAKRASVFVKLQKPNAAIRDCDRAIEINPDSAQPYKWRGKAHRLLGHWEEAAHDLALACKLDYDEDASAMLKEVQ PRAQKIAEHRRKYERKREEREIKERIERVKKAREEHERAQREEEARRQSGAQYGSFPGGFPGGMPGNFPGGMPGM GGGMPGMAGMPGLNEILSDPEVLAAMQDPEVMVAFQDVAQNPANMSKYQSNPKVMNLISKLSAKFGGQA

 ${\tt MAAAMDVDTPSGTNSGAGKKRFEVKKWNAVALWAWDIVVDNCAICRNHIMDLCIECQANQASATSEECTVAWGVC} \\ {\tt NHAFHFHCISRWLKTRQVCPLDNREWEFQKYGH}$

 ${\bf \underline{ATG}} {\tt GCCTCGGAAGACATTGCCAAGCTGGCAGAGACACTTGCCAAGACTCAGGTGGCCGGGGGACAGCTGAGTTTC}$ AAAGGCAAGAGCCTCAAACTCAACACTGCAGAAGATGCTAAAGATGTGATTAAAGAGATTGAAGACTTTGACAGC TTGGAGGCTCTGCGTCTGGAAGGCAACACAGTGGGCGTGGAAGCAGCCAGGGTCATCGCCAAGGCCTTAGAGAAG AAGTCGGAGTTGAAGCGCTGCCACTGGAGTGACATGTTCACGGGAAGGCTGCGGACCGAGATCCCACCAGCCCTG ATCTCACTAGGGGAAGGACTCATCACAGCTGGGGCTCAGCTGGTGGAGCTGGACTTAAGCGACAACGCATTCGGG CCCGACGGTGTGCAAGGCTTCGAGGCCCTGCTCAAGAGCTCAGCCTGCTTCACCCTGCAGGAACTCAAGCTCAAC AACTGTGGCATGGGCATTGGCGGCGGCAAGATCCTGGCTGCAGCTCTGACCGAAATGTCACCGGAAATCCAGTGCC CAAGGCAAGCCTCTGGCCCTGAAGGTCTTTGTGGCTGGCAGAAACCGTCTGGAGAATGATGGCGCCACTGCCTTG GCAGAAGCTTTTAGGGTCATCGGGACCCTGGAGGAGGTCCACATGCCACAGAATGGGATCAACCACCCTGGCATC ACTGCCCTGGCCCAGGCTTTCGCTGTCAACCCCCTGCTGCGGGTCATCAACCTGAATGACAACACCTTCACTGAG AAGGGCGCCGTGGCCATGGCCGAGACCTTGAAGACCTTGCGGCAGGTGGAGGTGATTAATTTTGGGGACTGCCTG GTGCGCTCCAAGGGTGCAGTTGCCATTGCAGATGCCATCCGCGGCGGCCTGCCCAAGCTAAAGGAGCTGAACTTG TCATTCTGTGAAATCAAGAGGGATGCTGCCCTGGCTGTTGCTGAGGCCATGGCAGACAAAGCTGAGCTGGAGAAG CTGGACCTGAATGGCAACACCCTGGGAGAAGAAGGCTGTGAACAGCTTCAGGAGGTGCTGGAGGGCTTCAACATG CGAGGGCAGGGAGAGAAGTCAGCCACGCCCTCACGGAAGATTCTGGACCCTAACACTGGGGAGCCAGCTCCCGTG CTGTCCTCCCCACCTCCTGCAGACGTCTCCACCTTCCTGGCTTTTCCCTCTCCAGAGAAGCTCCTGCGCCTAGGG CCCAAGAGCTCCGTGCTGATAGCCCAGCAGACTGACACGTCTGACCCCGAGAAGGTGGTCTCTGCCTTCCTAAAG GTGTCATCTGTGTTCAAGGACGAAGCTACTGTGAGGATGGCAGTGCAGGATGCAGTAGATGCCCTGATGCAGAAG GCTTTCAACTCCTCGTCCTTCAACTCCAACACCTTCCTCACCAGGCTCCTCGTGCACATGGGTCTGCTCAAGAGT GAAGACAAGGTCAAGGCCATTGCCAACCTGTACGGCCCCCTGATGGCGCTGAACCACATGGTGCAGCAGGACTAT TTCCCCAAGGCCCTTGCACCCCTGCTGCTGCGTTCGTGACCAAGCCCCAACAGCGCCCTGGAATCCTGCTCCTTC GCCCGCCACAGTCTGCTGCAGACGCTGTACAAGGTCTAG

MASEDIAKLAETLAKTQVAGGQLSFKGKSLKLNTAEDAKDVIKEIEDFDSLEALRLEGNTVGVEAARVIAKALEK KSELKRCHWSDMFTGRLRTEIPPALISLGEGLITAGAQLVELDLSDNAFGPDGVQGFEALLKSSACFTLQELKLN NCGMGIGGGKILAAALTECHRKSSAQGKPLALKVFVAGRNRLENDGATALAEAFRVIGTLEEVHMPQNGINHPGI TALAQAFAVNPLLRVINLNDNTFTEKGAVAMAETLKTLRQVEVINFGDCLVRSKGAVAIADAIRGGLPKLKELNL SFCEIKRDAALAVAEAMADKAELEKLDLNGNTLGEEGCEQLQEVLEGFNMAKVLASLSDDEDEEEEEEGEEEEE AEEEEEEEEEEEEEEEPQQRGQGEKSATPSRKILDPNTGEPAPVLSSPPPADVSTFLAFPSPEKLLRLG PKSSVLIAQQTDTSDPEKVVSAFLKVSSVFKDEATVRMAVQDAVDALMQKAFNSSSFNSNTFLTRLLVHMGLLKS EDKVKAIANLYGPLMALNHMVQQDYFPKALAPLLLAFVTKPNSALESCSFARHSLLQTLYKV

PCT/US2003/028547

6581/6881 FIGURE 6077

MSDAGGGKKPPVDPQAGPGPGPGRAAGERGLSGSFPLVLKKLMENPPREARLDKEKGKEKLEEDEAAAASTMAVS ASLMPPIWDKTIPYDGESFHLEYMDLDEFLLENGIPASPTHLAHNLLLPVAELEGKESASSSTASPPSSSTAIFQ PSETVSSTESSLEKERETPSPIDPNCVEVDVNFNPDPADLVLSSVPGGELFNPRKHKFAEEDLKPQPMIKKAKKV FVPDEQKDEKYWTRRKKNNVAAKRSRDARRLKENQITIRAAFLEKENTALRTEVAELRKEVGKCKTIVSKYETKY GPL

FIGURE 6079

CATCTTTGTCAGTGCACAAA<u>ATG</u>GCGCCCTACAGCCTACTGGTGACTCGGCTGCAGAAAGCTCTGGGTGTGCGGC AGTACCATGTGGCCTCAGTCCTGTGCCAACGGGCCCAAGGTGGCGATGAGCCACTTTGAGCCCAACGAGTACATCC ATTATGACCTGCTAGAGAAGAACATTAACATTGTTCGCAAACGACTGAACCGGCCGCTGACACTCTCGGAGAAGA TTGTGTATGGACACCTGGATGACCCCGCCAGCCAGGAAATTGAGCGAGGCAAGTCGTACCTGCGGCTGCGGCCGG ACCGTGTGGCCATGCAGGATGCGACGGCCCAGATGGCCATGCTCCAGTTCATCAGCAGCGGGCTGTCCAAGGTGG CTGTGCCATCCACCATCCACTGTGACCATCTGATTGAAGCCCAGGTTGGGGGCGAGAAAGACCTGCGCCGGGCCA AGGACATCAACCAGGAAGTTTATAATTTCCTGGCAACTGCAGGTGCCAAATATGGCGTGGGCTTCTGGAAGCCTG GATCTGGAATCATTCACCAGATTATTCTGGAAAACTATGCGTACCCTGGTGTTCTTCTGATTGGCACTGACTCCC ACACCCCAATGGTGGCGGCCTTGGGGGCATCTGCATTGGAGTTGGGGGTGCCGATGCTGTGGATGTCATGGCTG CCAAAGATGTGATCCTGAAGGTGGCAGGCATCCTCACGGTGAAAGGTGGCACAGGTGCAATCGTGGAATACCACG GGCCTGGTGTAGACTCCATCTCCTGCACTGGCATGGCGACAATCTGCAACATGGGTGCAGAAATTGGGGCCACCA CTGATGAATTCAAGGATCACTTGGTGCCTGACCCTGGCTGCCATTATGACCAACTAATTGAAATTAACCTCAGTG AGCTGAAGCCACACATCAATGGGCCCTTCACCCCTGACCTGGCTCACCCTGTGGCAGAAGTGGGCAAGGTGGCAG AGAAGGAAGGATGGCCTCTGGACATCCGAGTGGGTCTAATTGGTAGCTGCACCAATTCAAGCTATGAAGATATGG GGCGCTCAGCAGCTGTGGCCAAGCAGGCACTGGCCCATGGCCTCAAGTGCAAGTCCCAGTTCACCATCACTCCAG GTTCCGAGCAGATCCGCGCCACCATTGAGCGGGACGGCTATGCACAGATCTTGAGGGATCTGGGTGGCATTGTCC TGGCCAATGCTTGTGGCCCCTGCATTGGCCAGTGGGACAGGACATCAAGAAGGGGGGAGAAGAACACAATCG TCACCTCCTACAACAGGAACTTCACGGGCCGCAACGACGCCAAACCCCGAGACCCATGCCTTTGTCACGTCCCCAG AGATTGTCACAGCCCTGGCCATTGCGGGAACCCTCAAGTTCAACCCAGAGACCGACTACCTGACGGCACGGATG GCAAGAAGTTCAGGCTGGAGGCTCCGGATGCAGATGAGCTTCCCAAAGGGGAGTTTGACCCAGGGCAGGACACCT AGCCTTTTGACAAGTGGGATGCCAAGGACCTGGAGGACCTGCAGATCCTCATCAAGGTCAAAGGGAAGTGTACCA CTGACCACATCTCAGCTGCTGGCCCCTGGCTCAAGTTCCGTGGGCACTTGGATAACATCTCCAACAACCTGCTCA TTGGTGCCATCAACATTGAAAACGGCAAGGCCAACTCCGTGCGCAATGCCGTCACTCAGGAGTTTGGCCCCGTCC TCCACGAGACCAACCTGAAGAAACAGGGCCTGCTGCCTCTGACCTTCGCTGACCCGGCTGACTACAACAAGATTC ACCCCAACGGGACCCAGGAGACCATCCTCCTGAACCACACCTTCAACGAGACGCAGATTGAGTGGTTCCGCGCTG GCAGTGCCCTCAACAGAATGAAGGAACTGCAACAG<u>TGA</u>GGGCAGTGCCTCCCCGCCGCGCGTCGACGTTCAG CTCCACGTGTGCCATCAGTGGATCCGATCCGTCCAGCCATGGCTTCCTATTCCAAGTAGTGTAACCC

MAPYSLLVTRLQKALGVRQYHVASVLCQRAKVAMSHFEPNEYIHYDLLEKNINIVRKRLNRPLTLSEKIVYGHLD
DPASQEIERGKSYLRLRPDRVAMQDATAQMAMLQFISSGLSKVAVPSTIHCDHLIEAQVGGEKDLRRAKDINQEV
YNFLATAGAKYGVGFWKPGSGIIHQIILENYAYPGVLLIGTDSHTPNGGGLGGICIGVGGADAVDVMAGIPWELK
CPKVIGVKLTGSLSGWSSPKDVILKVAGILTVKGGTGAIVEYHGPGVDSISCTGMATICNMGAEIGATTSVFPYN
HRMKKYLSKTGREDIANLADEFKDHLVPDPGCHYDQLIEINLSELKPHINGPFTPDLAHPVAEVGKVAEKEGWPL
DIRVGLIGSCTNSSYEDMGRSAAVAKQALAHGLKCKSQFTITPGSEQIRATIERDGYAQILRDLGGIVLANACGP
CIGQWDRKDIKKGEKNTIVTSYNRNFTGRNDANPETHAFVTSPEIVTALAIAGTLKFNPETDYLTGTDGKKFRLE
APDADELPKGEFDPGQDTYQHPPKDSSGQHVDVSPTSQRLQLLEPFDKWDGKDLEDLQILIKVKGKCTTDHISAA
GPWLKFRGHLDNISNNLLIGAINIENGKANSVRNAVTQEFGPVPDTARYYKKHGIRWVVIGDENYGEGSSREHAA
LEPRHLGGRAIITKSFARIHETNLKKQGLLPLTFADPADYNKIHPVDKLTIQGLKDFTPGKPLKCIIKHPNGTQE

ACGCTCCTTCCTCGGGAAGGAGGCGCCACCTCGCGTTTGAGGCCCGCCTGCGTTTGAGGCCCGCCTGCGCTTGCG GCCCGCCTGCGCTTGAGGCCTGTCTGCGTTTGAGATCTCATTGGGCGTGATTGAGGAATTTGGGGAGGTTTTTGG GCGGTATTGAGGACGAGGGGGTCCGTTAGTCAGCATAGAATCCTGGAGCGGGAATCCCTCACCGTCTAAATGGCG TCGGGGGCGGGACCTCCGGGATCTGGCTTCCGCGGGCCGCCGCCCGGCCCTGAAACGTGAGGGATAGCTGAGATGA GGCAGCTACTGGGATGGCCCCCATGCGCATTTACATGCAGTCCGACTGCCGAGCTTTCGAGGCAGCAGGATTTAC CGTCCACATTCCTCACTACTAACCAAGCTTTTAGAACAGATCTCACAAGAACCTAGAGGTCGGTATTTTTTCGAT $\tt TTAAATTTGCCTGTTACTGACGTTAACGTCTTTCGCCTAGTGAGCAGTAGCCAAC \underline{ATG} \texttt{TCAGGGTGGGAGTCATA}$ TTACAAAACCGAGGGCGATGAAGAAGCAGAGGAAGAACAAGAAGAAGCCTTGAAGCAAGTGGAGACTATAAATA TTCAGGAAGAGATAGTTTGATTTTTTTGGTTGATGCCTCCAAGGCTATGTTTGAATCTCAGAGTGAAGATGAGTT GACACCTTTTGACATGAGCATCCAGTGTATCCAAAGTGTGTACATCAGTAAGATCATAAGCAGTGATCGAGATCT CTTGGCTGTGGTGTTCTATGGTACCGAGAAAGACAAAAATTCAGTGAATTTTAAAAAATATTTACGTCTTACAGGA GCTGGATAATCCAGGTGCAAAACGAATTCTAGAGCTTGACCAGTTTAAGGGGCAGCAGGGACAAAAACGTTTCCA AGACATGATGGGCCACGGATCTGACTACTCACTCAGTGAAGTGCTGTGGGTCTGTGCCAACCTCTTTAGTGATGT CCAATTCAAGATGAGTCATAAGAGGATCATGCTGTTCACCAATGAAGACAACCCCCATGGCAATGACAGTGCCAA AGCCAGCCGGGCCAGGACCAAAGCCGGTGATCTCCGAGATACAGGCATCTTCCTTGACTTGATGCACCTGAAGAA CTTTGAGGAATCCAGCAAGCTAGAAGACCTGTTGCGGAAGGTTCGCGCCAAGGAGACCAGGAAGCGAGCACTCAG CAGGTTAAAGCTGAAGCTCAACAAAGATATAGTGATCTCTGTGGGCATTTATAATCTGGTCCAGAAGGCTCTCAA GCCTCCTCCAATAAAGCTCTATCGGGAAACAAATGAACCAGTGAAAACCAAGACCCGGACCTTTAATACAAGTAC AGGCGGTTTGCTTCTGCCTAGCGATACCAAGAGGTCTCAGATCTATGGGAGTCGTCAGATTATACTGGAGAAAGA GGAAACAGAAGAGCTAAAACGGTTTGATGATCCAGGTTTGATGCTCATGGGTTTCAAGCCGTTGGTACTGCTGAA GAAACACCATTACCTGAGGCCCTCCCTGTTCGTGTACCCAGAGGAGTCGCTGGTGATTGGGAGCTCAACCCTGTT CAGTGCTCTGCTCATCAAGTGTCTGGAGAAGGAGGTTGCAGCATTGTGCAGATACACACCCCGCAGGAACATCCC TCCTTATTTTGTGGCTTTGGTGCCACAGGAAGAAGAGTTGGATGACCAGAAAATTCAGGTGACTCCTCCAGGCTT ${\tt CCAGCTGGTCTTTTTACCCTTTGCTGATGATAAAAGGAAGATGCCCTTTACTGAAAAAATCATGGCAACTCCAGA}$ GCAGGTGGGCAAGATGAAGGCTATCGTTGAGAAGCTTCGCTTCACATACAGAAGTGACAGCTTTGAGAACCCCGT GCTGCAGCAGCACTTCAGGAACCTGGAGGCCTTGGCCTTGGATTTGATGGAGCCGGAACAAGCAGTGGACCTGAC GGAGTATTCAGAAGAGGGGGCTGAAGACCCACATCAGCAAGGGTACGCTGGGCAAGTTCACTGTGCCCATGCTGAA AGAGGCCTGCCGGGCTTACGGGCTGAAGAGTGGTCTGAAGAAGCAGGAGCTGCTGGAAGCCCTCACCAAGCACTT AGTTAAAATGTGTTTCTCCTGAGCTAGGAAGAGTCTACCCGACATAAGTCGAGGGACTTTATGTTTTTGAGGCTT TCTGTTGCCATGGTGATGGTGTAGCCCTCCCACTTTGCTGTTCTTTACTGCCTGAATAAAGAGCCCTAAG

MSGWESYYKTEGDEEAEEQEENLEASGDYKYSGRDSLIFLVDASKAMFESQSEDELTPFDMSIQCIQSVYISKI
ISSDRDLLAVVFYGTEKDKNSVNFKNIYVLQELDNPGAKRILELDQFKGQQGQKRFQDMMGHGSDYSLSEVLWVC
ANLFSDVQFKMSHKRIMLFTNEDNPHGNDSAKASRARTKAGDLRDTGIFLDLMHLKKPGGFDISLFYRDIISIAE
DEDLRVHFEESSKLEDLLRKVRAKETRKRALSRLKLKLNKDIVISVGIYNLVQKALKPPPIKLYRETNEPVKTKT
RTFNTSTGGLLLPSDTKRSQIYGSRQIILEKEETEELKRFDDPGLMLMGFKPLVLLKKHHYLRPSLFVYPEESLV
IGSSTLFSALLIKCLEKEVAALCRYTPRRNIPPYFVALVPQEEELDDQKIQVTPPGFQLVFLPFADDKRKMPFTE
KIMATPEQVGKMKAIVEKLRFTYRSDSFENPVLQQHFRNLEALALDLMEPEQAVDLTLPKVEAMNKRLGSLVDEF
KELVYPPDYNPEGKVTKRKHDNEGSGSKRPKVEYSEEELKTHISKGTLGKFTVPMLKEACRAYGLKSGLKKQELL
EALTKHFQD

ATCCGTGTCCTTGCGGTGCTGGGCAGCAGACCGTCCAAACCGACACGCGTGGTATCCTCGCGGTGTCCGGCAAGA $\texttt{GACTACCAAGACAGACGCT} \underline{\textbf{ATG}} \texttt{ACTGAGGCTGATGTGAATCCAAAGGCCTATCCCCTTGCCGATGCCCACCTCAC}$ CAAGAAGCTACTGGACCTCGTTCAGCAGTCATGTAACTATAAGCAGCTTCGGAAAGGAGCCAATGAGGCCACCAA AACCCTCAACAGGGGCATCTCTGAGTTCATCGTGATGGCTGCAGACGCCGAGCCACTGGAGATCATTCTGCACCT GCCGCTGCTGTGTGAAGACAAGAATGTGCCCTACGTGTTTGTGCGCTCCAAGCAGGCCCTGGGGAGAGCCTGTGG GGTCTCCAGGCCTGTCATCGCCTGTTCTGTCACCATCAAAGAAGGCTCGCAGCTGAAACAGCAGATCCAATCCAT ${\tt TCAGCAGTCCATTGAAAGGCTCTTAGTC} \underline{{\tt TAA}} {\tt ACCTGTGGCCTCTGCCACGTGCTCCCAGCTTCCCCCCTGA}$ GGTTGTGTATCATATTATCTGTGTTAGCATGTAGTATTTTCAGCTACTCTCTATTGTTATAAAATGTAGTACTAA CGTTGAAAGGCAGAAAGAGCCAGGAGAAAGCTGATGGAGCCAGGACAGAGATCTGGTTCCAGCTTTCAGCCACTA ATTCATACGTGTTCAAGTGATCAAGGGGTTTCATTTGCTCTTGGGGGGATTAGGTATCATTTGGGGAGGAAGCATG TGTTCTGTGAGGTTGTTCGGCTATGTCCAAGTGTCGTTTACTAATGTACCCCTGCTGTTTGCTTTTGGTAATGTG ATGTTGATGTTCTCCCCCTACCCACACCATGCCCTTGAGGGTAGCAGGGCAGCAGCATACCAAAGAGATGTGCT GCAGGACTCCGGAGGCAGCCTGGGTGAGCCATGGGGCAGTTGACCTGGGTCTTGAAAGAGTCGGGAGTGAC TCTGAGAGCCCTTCCCCTGTGTCCTGCCACCATGTGGGTCAGATGTACTCTCTGTCACATGAGGAGAGTGCTAGT TCATGTGTTCTCCATTCTTGTGAGCATCCTAATAAATCTGTTCCATTTTG

 ${\tt MTEADVNPKAYPLADAHLTKKLLDLVQQSCNYKQLRKGANEATKTLNRGISEFIVMAADAEPLEIILHLPLLCED}\\ KNVPYVFVRSKQALGRACGVSRPVIACSVTIKEGSQLKQQIQSIQQSIERLLV$

WO 2004/030615 PCT/US2003/028547

6589/6881 FIGURE 6085A

CCGTCGGTGAGGCGGTGCCGGGGGGTTGTCGGGTGTCATGGGCGGTGGCGACGGCACCGCCCCCGCGTCTCC ACCATGGAGACCCTCACGGAGCTGGGCGACGAGCTGACCCTGGGAGACATCGACGAGATGCTGCAATTTGTCAGT AATCAAGTGGGAGAGTTCCCTGACTTGTTTTCAGAACAGCTGTTGTAGCTCCTTTCCTGGCAGTGGTGGTAGTGGT CCCCAGCCTCAACCTCAAACTCAGCTGCAACAACAGACGGTAATGATCACGCCAACATTCAGCACCACTCCGCAG ACGAGGATCATCCAGCAGCCTTTGATATACCAGAATGCAGCTACTAGCTTTCAAGTCCTTCAGCCTCAAGTCCAA AGCCTGGTGACATCCTCCCAGGTACAGCCGGTCACCATTCAGCAGCAGGTGCAGACAGTACAGGCCCAGCGGGTG CTGACACAAACGGCCAATGGCACGCTGCAGACCCTTGCCCCGGCTACGGTGCAGACAGTTGCTGCGCCACAGGTG CAGCAGGTCCCGGTCCTGGTCCAGCCTCAGATCATCAAGACAGATTCCCTTGTTTTGACCACACTGAAGACAGAT GGCAGCCCTGTTATGGCTGCGGTCCAGAACCCGGCCCTCACCGCCCTCACCACCCCTATCCAGACGGCTGCCCTT CAAGTACCAACCCTGGTGGGCAGCAGTGGGACCATTCTGACCACAATGCCTGTAATGATGGGGGCAAGAGAAAGTG CCCATTAAGCAGGTACCTGGGGGAGTCAAGCAGCTTGAGCCCCCCAAAGAAGGAGAAAGGCGGACAACCCATAAT ATCATTGAGAAACGATATCGCTCCTCCATCAATGACAAAATCATCGAATTGAAAGACCTGGTCATGGGGACAGAC GCCAAGATGCACAAGTCTGGCGTTCTGAGGAAGGCCATTGATTACATCAAAATACTTGCAGCAGGTCAATCATAAA $\tt CTGCGCCAGGAGAACATGGTGCTGAAGCTGGCAAATCAAAAGAACAAGCTTCTAAAGGGCATCGACCTAGGCAGT$ $\tt CTGGTGGACATGAGGTGGACCTGAAGATCGAGGACTTTAATCAGAATGTCCTTCTGATGTCCCCCCCAGCCTCT$ GACTCAGGGTCCCAGGCTGGCTTCTCCCCTACTCCATTGACTCTGAGCCAGGAAGCCCTCTATTGGATGATGCA AAGGTCAAAGATGAGCCAGACTCTCCTGTGGCGCTGGGCATGGTAGACCGCTCACGGATTCTTCTGTGTGTC CTCACCTTCCTGTGCCTCTCCTTTAACCCCCTGACTTCCCTGCTGCAGTGGGGAGGGGCCCACGACTCTGACCAG CACCCACACTCAGGCTCTGGCCGCAGTGTCCTGTCATTCGAGTCAGGTTCTGGGGGGCTGGTTTGACTGGATGATG CCAGTGATCCGGCCACACTCGCGCTCCTCGGTCACCTTCTGGAGGCACCGGAAACAGGCAGATCTGGATCTCGCC CGCCTGGACCTGCCAGCCTCCCTGGAACGTGATCCGCTACAGCCTGCAGAAGCTACGCCTGGTGCGCTGG AGCGCCCGGGATGCGGCTCTGGCCTATCACCGGCTGCACCAGCTGCACATCACAGGGAAGCTTCCTGCAGGATCC GCCTGTTCCGATGTACACATGGCGTTGTGTGCCGTGAACCTGGCTGAATGTGCAGAGGAGAAGATCCCACCGAGC ACACTGGTTGAGATCCATCTGACTGCCATGGGGCTCAAGACCCGGTGTGGAGGCAAGCTGGGCTTCCTGGCC AGCTACTTCCTCAGCCGAGCCCAGAGCCTGTGTGGCCCCGAGCACAGTGCTGTTCCTGACTCCCTGCGCTGGCTC TGCCACCCCTGGGCCAGAAGTTTTTCATGGAGCGGAGCTGGTCTGTGAAGTCAGCTGCCAAGGAGAGTCTATAC ATAGAGTCCTTGGTGAAACCTCAGGCCAAGAAGAAGGCTGGAGACCAGGAAGAAGAGAGCTGTGAATTCTCCAGT GCTCTGGAGTACTTGAAATTACTTCATTCTTTTGTGGACTCTGTGGGGGTTATGAGCCCCCCACTCTCCAGGAGC TCCGTGCTCAAGTCCGCCCTGGGTCCAGACATCATCTGTCGGTGGTGGACGTCTGCAATCACTGTGGCCATCAGC TGGCTCCAGGGAGACGATGCAGCTGTGCGCTCTCATTTTACCAAAGTGGAACGCATCCCCAAGGCCCTGGAAGTG GGGCAGCAGAGTTCCTTCTGCCATTGCGAGAGGGCCAGTGGCCACCTATGGAGCAGCCTCAACGTCAGTGGGGGC ACCTCTGACCCTGCCCTCAACCACGTGGTCCAGCTGCTCACCTGTGACCTGCTACTGTCGCTACGGACAGCGCTC TGGCAAAAACAGGCCAGTGCCAGCCAGGCTGTGGGGGAGACCTACCACGCGTCAGGCGCTGAACTGGCGGGCTTC CAACGGGACCTGGGCAGGCTGGCACACACCTTCCGCCCAGCATACCGCAAGGTGTTCCTGCATGAA ACCACGCAGAGCACCAAGCACGGAGAGGTGGATGCCTGGCCCGGCCAGCGAGAGCGGGCCACCGCCATCCTGCTG GCCTGCCGCCACCTGCCCCTCTCCTCCCCCCGGGCCAGCGGGCAGTGCTGCCGGAAGCTGCCCGC ACCCTGGAGAAGGTGGGCGACCGGCGCTCCTGCAACGACTGCCAGCAGATGATTGTTAAGCTGGGTGGTGGCACT

6590/6881 FIGURE 6085B

GRGSSSGAVDPSVQRSFTQVTLPSFSPSAASPQAPTLQVKVSPTSVPTTPRATPILQPRPQPQPQPQTQLQQQTV ${\tt MITPTFSTTPQTRIIQQPLIYQNAATSFQVLQPQVQSLVTSSQVQPVTIQQQVQTVQAQRVLTQTANGTLQTLAP}$ ${\tt ATVQTVAAPQVQQVPVLVQPQIIKTDSLVLTTLKTDGSPVMAAVQNPALTALTTPIQTAALQVPTLVGSSGTILT}$ TMPVMMGQEKVPIKQVPGGVKQLEPPKEGERRTTHNIIEKRYRSSINDKIIELKDLVMGTDAKMHKSGVLRKAID $\verb"YIKYLQQVNHKLRQENMVLKLANQKNKLLKGIDLGSLVDNEVDLKIEDFNQNVLLMSPPASDSGSQAGFSPYSID"$ ${\tt SEPGSPLLDDAKVKDEPDSPPVALGMVDRSRILLCVLTFLCLSFNPLTSLLQWGGAHDSDQHPHSGSGRSVLSFE}$ ${\tt SGSGGWFDWMMPTLLLWLVNGVIVLSVFVKLLVHGEPVIRPHSRSSVTFWRHRKQADLDLARGDFAAAAANLQTC}$ LAVLGRALPTSRLDLACSLSWNVIRYSLQKLRLVRWLLKKVFQCRRATPATEAGFEDEAKTSARDAALAYHRLHQ LHITGKLPAGSACSDVHMALCAVNLAECAEEKIPPSTLVEIHLTAAMGLKTRCGGKLGFLASYFLSRAQSLCGPE HSAVPDSLRWLCHPLGQKFFMERSWSVKSAAKESLYCAQRNPADPIAQVHQAFCKNLLERAIESLVKPQAKKKAG DQEEESCEFSSALEYLKLLHSFVDSVGVMSPPLSRSSVLKSALGPDIICRWWTSAITVAISWLQGDDAAVRSHFT KVERIPKALEVTESPLVKAIFHACRAMHASLPGKADGQQSSFCHCERASGHLWSSLNVSGGTSDPALNHVVQLLT $\verb|CDLLLSLRTALWQKQASASQAVGETYHASGAELAGFQRDLGSLRRLAHSFRPAYRKVFLHEATVRLMAGGSPTRT|\\$ ${\tt HQLLEHSLRRRTTQSTKHGEVDAWPGQRERATAILLACRHLPLSFLSSPGQRAVLLAEAARTLEKVGDRRSCNDC}$ OOMIVKLGGGTAIAAS

6592/6881 FIGURE 6087A

GATTCGAGTCAGAAGCGGCGGCAGGTCTGAACGCTTCGGTAGGATAAGTGCGGTGGGAGGGGGCTCTGCGGTTTT TCCGGGAAGTGATGGCTGGGGATGGGGCGGCAACTTGGGGACCGAGTGTACGATCCACGCCTAAGGTTGAGGGC GGCCGAGCTAGCCAGGCAGCCGTGACCCCAGTGCTTTTCAGACGTTTCTTAGCTTCCAGAGCCCCAACACATACAG CTGATACACGCAGACCAGATCTGGTCAGGTCCTCGGAAGCTGAGTCCAGAGCGATGCTGCTGAAGACAGTGCTCT TGCTGGGACATGTGGCCCAGGTGCTGATGCTGGACAATGGGCTCCTGCAGACACCACCCATGGGCTGGCCTGGCCT GGGAACGCTTCCGCTGCAACATTAACTGTGATGAGGACCCAAAGAACTGCATAAGTGAACAGCTCTTCATGGAGA TGGCTGACCGGATGGCACAGGATGGATGGCGGGACATGGGCTACACATACCTCAACATTGATGACTGCTGGATCG GTGGTCGCGATGCCAGTGGCCGCCTGATGCCGGATCCCAAGCGCTTCCCTCATGGCATTCCTTTCCTGGCTGACT ACGTTCACTCCCTGGGCCTGAAGTTGGGTATCTACGCGGACATGGGCAACTTCACCTGCATGGGTTACCCAGGCA CCACACTGGACAAGGTGGTCCAGGATGCTCAGACCTTCGCCGAGTGGAAGGTAGACATGCTCAAGCTGGATGGCT GCTTCTCCACCCCGAGGAGCGGGCCCAGGGGTACCCCAAGATGGCTGCTGCCCTGAATGCCACAGGCCGCCCCA TCGCCTTCTCCTGCAGCTGGCCAGCCTATGAAGGCGGCCTCCCCCCAAGGGTGAACTACAGTCTGCTGGCGGACA TCTGCAACCTCTGGCGTAACTATGATGACATCCAGGACTCCTGGTGGAGCGTGCTCTCCATCCTGAATTGGTTCG TGGAGCACCAGGACATACTGCAGCCAGTGGCCGGCCCTGGGCACTGGAATGACCCTGACATGCTCCTCATTGGGA ACTTTGGTCTCAGCTTAGAGCAATCCCGGGCCCAGATGGCCCTGTGGACGGTGCTGGCAGCCCCCTCTTGATGT CCACAGACCTGCGTACCATCTCCGCCCAGAACATGGACATTCTGCAGAATCCACTCATGATCAAAATCAACCAGG ATCCCTTAGGCATCCAGGGACGCAGGATTCACAAGGAAAAATCTCTCATCGAAGTGTACATGCGGCCTCTGTCCA ACAAGGCTAGCGCCTTAGTCTTCTCAGCTGCAGGACCGATATGCCTTATCGCTACCACTCCTCCCTTGGCCAGC TGAACTTCACCGGGTCTGTGATATATGAGGCCCAGGACGTCTACTCAGGTGACATCATCAGTGGCCTCCGAGATG AAACCAACTTCACAGTGATCATCAACCCTTCAGGGGTAGTGATGTGGTACCTGTATCCCATCAAGAACCTGGAGA TGTCCCAGCAGTGAGGAGCTGGGACATGTGACAGGCTGTGGTGGCACCACTGAGCCTAGACCATGGAGCCTTGGC ATCTCACGGCCAGGTTCTATGCCCTGTCCAAGCGTAAACCCTCTTGGAAACTTCTTTTGGGGCAATTTTCCTGTG GCCTTCCTGGCCTCTACTTCCATGTGCGCAGCCCCACAGACGTTGCTGAGCAACTCGCCAGCCTCCTGAGCTCCA TGCCCATCAGGACTCTAGCCTCTGACCTTGCTGTTGACTCTGAAATCAGGATTTGGAAGTTTTCGAATTAGGAGT AGAGAGATCTGACCTCTTGCCAGGAATGCCCATGGATCATGTGATTGGCTTTTCTACCCATAGAGGGCCTTGCAG CCTGATACCACCTGGGAGTGAGGGTCACAAAGGAGACCTTGGCTCCCTCAGGTCACCAATAAACCTGTTCTTTAA AATCTCACCTCTATGGATGATGTCTGGCATCGTCTGGCCCCTCCTTTTCCAAAGTGACCAGAAGATTGTACTTCC TAGAGATGCCAGACTTGCCTCACACCCAGGAGCTGCCCCTGCTGTGCCTGGTATGCTGGCAGTGGTGATGGTGAC AACACAATGAGGCCAAGTAGCAATGCTCCCAGGTCCTGCAGCTTGTGCTCTGCCCAGCAGTGCCCCTGGCCCAGC ACCTCAGCCTGCTCTTCTCTCTGGTGGCTCCACCCCAACCCCTACTTCTTTTCCTTTATTTCTCTCCCAACCTGG CTGCAAAGGAGGTTCATATTCCCCAGATGTGTCCACAAACCTGTCCAGGAGTTGTGTCTTAAAATTGATTTCCTG TCCCTCTTCCTAAGGACAGGGGTAACAGTCAAAGTGAAGGAATGATGGGTTCTTGCCTGTCTTGGTCCGT ATTTCCCAAGCCCTCCTCTTTTAGCCAAGGCTACAGGGCACTTGTCTTCCCTGGTGGCTCTCCCCTTTGGAGAGA GCTAGTGGCAGAGCAACCTAGCTAGGTCCTCCTTGGGCTTTGAATGCAGGAGCACCCAGTGCCCCAGGCCTTGCA $\tt CTGTGCTGCCCAAGGAGTATTTTCTGGGTGGATCTCCCATACTCCTCAGGGTTCTGAGGTCCTTGTATTTAGGGT$ ATGGTGTAAAAACTTACATATGCACATTTTGTTACATCATTTAAGATGATTGAAGCTTTACTGGTTAAGTATAGG GTCACCAGAGAAAGTTCCTTTCCCCAGTTGATGTCTTGAGGCTGTTGAGAAACTTAGGACAGAAGCCTACCTCAT $\tt CCCAGGCCTGCCCTCCGTGCATAGCTCTGCCTTTGGGTCTTGTTCATAGTGCTGTTCAGGCAAAATGGAATAGT$ CTCAGGTGGGAACACCTTCTCTTGCTAGCTCCAGGAAGGCTTTGTGGGAAATGAGTTGAGACCATGGACTTGGGA CAAACATGCCATCTATCTCCCAGGACATTTATTCCCTTCTATTCAAGGCCAGTTAGGAATGCAATTATTTTTTT TTTCAGTTAAATACAGACTTGTTTGGACGCAAGGTACCCTTTCTCTTTTTAAAAACTTTTTATCATGAAAACTTT

6593/6881 FIGURE 6087B

CAAATACAAAATAAAATGGTAGAGTGAACCTCCATG

GAGAGTGTCCTGCCTGGTCCTCTGTGCCTGGTGGGGTGCCCAGGTGTGTCCAGAGGAGCCCAGTTGGTAG TGAGGCAGCCATGGGGCTAGAAGCACTGGTGCCCCTGGCCATGATAGTGGCCATCTTCCTGCTCCTGGTGGACCT GATGCACCGCCACCAACGCTGGGCTGCACGCTACCCGCCAGGTCCCCTGCCACTGCCCGGGCTGGGCAACCTTGC TGCATGTGGACTTCCAGAACACCATACTGCTTCGACCAGTTGCGGCGCCGCTTCGGGGACGTGTTCAGCCTGC AGCTGGCCTGGACGCCGGTGGTCGTCCTCAATGGGCTGGCGGCCGTGCGCGAGGCGATGGTGACCCGCGGCGAGG ${\tt ACACGGCCGACCGCCCGCCTGCGCCCATCTACCAGGTCCTGGGCTTCGGGCCGCGTTCCCAAGGGGTGATCCTGT}$ CGCGCTATGGGCCCGCGTGGCGCGAGCAGAGGCGCTTCTCCGTGTCCACCTTGCGCAACTTGGGCCTGGGCAAGA AGTCGCTGGAGCAGTGGCTGACCGAGGAGGCCGCCTTGTGCCGCCTTCGCCGACCAAGCCGGACGCCCCT ACGACGACCCTCGCTTCCTCAGGCTGCTGGACCTAGCTCAGGAGGGACTGAAGGAGGAGTCGGGCTTCCTGCGCG TAGTGGTGGGTAACCTGTTCCTTGCCGGGATGGTGACCACCTCGACCACGCTGGCCTGGGGCCTCCTGCTCATGA TCCTACACCTGGATGTGCAGCTCCGTGTCCAACAGGAGATCGACGACGTGATAGGGCAGGTGCGGCGACCAGAGA TGGGTGACCAGGCTCACATGCCCTGCACCACTGCCGTGATTCACGAGGTGCAGCGCTTTGGGGGACATCATCCCCC TGAGTGTGACCCATATGACATCCCGTGACATCGAAGTACAGGGCTTCCGCATCCCTAAGGGAACGACACTCATCA CCAACCTGTCATCGGTGCTGAAGGATGAGGCCGTCTGGAAGAAGCCCTTCCGCTTCCACCCCGAACACTTCCTGG ATGCCCAGGGCCACTTTGTGAAGCCGGAGGCCTTCCTGCCTTTCTCAGCAGGCCGCCGTGCATGCCTCGGGGAGC AGCCCCGGCCCAGCCACTCTCGTGTCGTCAGCTTTCTGGTGACCCCATCCCCCTACGAGCTTTGTGCTGTGCCCC GCTAGAATGGGGTACCTAGTCCCCAGCCTGCTCCCTAGCCAGAGGCTCTAATGTACAATAAAGCAATGTGGTAGT TCCAACTTGGGTCCCCTGCTCACGCCCTCGTTGGGATCATCCTCCTCAGGGCAACCCCACCCCTGCCTCATTCCT GCTTACCCCACCGCCTGGCCGCATTTGAGACGGGTACGTTGAGGCTGAGCAGATGTCAGTTACCCTTGCCCATAA TCCCATGTCCCCACTGACCCAACTCTGACTGCCCAGATTGGTGACAAGGACTACATTGTCCTGGCATGTGGGGA AGGGGCCAGAATGGGCTGACTAGAGGTGTCAGTCAGCCCTGGATGTGGAGAGGGCAGGACTCAGCCTGGAGG CCCATATTTCAGGCCTAACTCAGCCCACCCCACATCAGGGACAGCAGTCCTGCCAGCACCATCACAACAGTCACC TCCCTTCATATATGACACCCCAAAATGGAAGACAAATCATGTCAGGGAGCTATATGCCAGGGCTACCTCCCAGGG CTCAGTCGGCAGGTGCCAGAACATTCCCTGGGAAGGCCCCAGGAAAACCCAGGACCGAGCCACCGCCCTCAGCCT GTCACCTTGTGTCCAAAATTGGTGGGTTCTTGGTCTCACTGACTTCAAGAATGAAGCCGTGGACCCTCACGGTGA GTGTTACAGTTCTT

ACACCATCCTCTTAGTTGCTCAGACTGAAAACCTAGCAGCCATCCTGGATTTCTCTCACACTGCCTATTCAACGT GTGAATGCATGAGTGGAAAGCTGAGTTCGCACTCGTGACTGGCCGGGGTCAACTCTGACATTCGCTCCCACTTTC GGGGCGGGCCACGAAAACGCGCTCGCGCCGGCGCCGAACCGCAACTCCCGGCGCCCCCCGCGCTCCCG GGTGGCAAGATGGTGGCGCAGGAGGAAGTGCGCCGCGGGGACCCGGAGGACCGTATCCCCAGCCCACTGGGC TACGCAGCTATTCCAATCAAGTTCTCTGAAAAGCAACAGGCTTCTCACTACCTCTATGTGAGAGCACACGGCGTT CGACAAGGCACCAAGTCCACCTGGCCTCAGAAGAGGACTCTTTTTGTCCTCAATGTGCCCCCATACTGCACAGAG GAGAGCCTGTCCCGCCTCCTGTCCACCTGTGGCCTCGTCCAGTCTGTAGAGTTGCAGGAGAAGCCGGACCTGGCT GAGAGCCCAAAGGAGTCAAGGTCGAAGTTTTTTCATCCCAAGCCAGTTCCGGGTTTCCAGGTAGCCTATGTGGTG TTCCAGAAGCCAAGTGGGGTGTCAGCGGCCTTGGCCCTGAAGGGCCCCCTGCTGGTGTCCACAGAGAGCCCACCCT GTGAAGAGTGGCATTCACAAGTGGATCAGTGACTACGCAGACTCTGTGCCCGACCCTGAGGCCCTGAGGGTGGAA GTGGACACGTTCATGGAGGCATATGACCAGAAGATCGCTGAGGAAGAAGCTAAGGCCAAGGAGGAGGAGGGGGGTC TTGCGGGTGCTGGAGAGGGAGAGAGCGCAGCCGAAAAGAGCTGCTCAACTTCTACGCCTGGCAGCATCGA GAGAGCAAGATGGAGCATCTAGCGCAGCTGCGCAAGAAGTTCGAGGAGGACAAGCAGAGGATCGAGCTGCTGCGG GCCCAGCGCAAATTCCGACCGTACTGAGCTGTGAGAGCCGCAGTGAATGGCTGGAGGTGCAGGGCCAGGAGGAGG CGAGGCAGGGCCTGCAGCGGTCTCTGAGAGGCCGAGCTCTGGCCAACGGGCCCCAGGTTGAAGGCCACCGCGTCC AACAGCCCCATCAGAGTCCACACAGGCCAGGAGGGAAGGACCAGGCCACCCCTCGGGTCTTGTGCTTCAGCAGTC TGGATGAATCCGTTCTGTGCTTCCTTTTCCCTCAATGCAAAAGCCCTTGCTGGCAACGAAAAAGCCTCAAAAGCA CCTTCCTCCAGCTGGCTGGAGATTATTAGCCAGGAGACAGCAGCCCTGGAACCCAGACTCTGTCTCCCCCTTGAG GTCACAGATGTTGAAGTTGGAATCTCGCTCCTTCCCCTGACTACCATCCTAGGCTGGGCCTCAAGACTAGTGAGG CCTGTCCCCACCATCCCTGGCCTTGTTGTGGGGCTCAGGAACTCAGAGTCCCAGTGTTGAGTCTGGGAGCACTAG ACTGGCCACGTGCTGGGGTTCGCTCATGTGGACACAGTGATTGCCTGGGACTTCCACAAACTGGAACCGCTCTTT GAGGGTGGATTTCATTGTGTCTATCATGAACGACAGGGACTCCTTGTCAGAGTAATTCTCTCTTGGATCAAAATA TCCGTGGACTGCTTTGATCAACAGGACATGGGCCTGCAGCTTCCTGATGGAATGCGCACACAGCTCCCTGCTGAC GAAGTCAATGCTGTTCTCTGCC

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6596/6881 FIGURE 6090A

CGATGAAGTGCAACCTTCACATGAATGGGAATGTTATCACCTCAGACCAGCCCATCCTGCTGTGAGTTCCAAAGG TTCATCCCCCCATTCCGTTTCCTCTGTTCTAATGGCAGCTGGCCGTTTCATATGCTTAAACTTGACCAAAATGGT TTGCTTTGTTATTTCCCCAGGGCTTGACCCTATAGGGACTAGCATTATGATCTCGTTCTCAGCTTTCTGATTTAG AAATATCTGAGTGGAAGTTGGAGGGGGAGGCTGCTTGGGTCTCCTAGCTGTGCATCATCCCGGGAACAGAGAA CTCCACTGCATGATTGGCTCTGATGGAGACAGTGCCAGATGCTACCCCTTATTTTGTTCCCCAGTGAGGTTTTTT CAAACTCCTGGGGTCAAGCAACCCTCTCCCCTCAGCCTCCTGAGGACCTGGGACTATAGGCGCACACCATCACGC ${\tt CCAGCTGGATTTGGCTTTAAGTACAGTGGGAAGCCATTGAAGGCTTTTGTTGCACAGAGCTGAGTATACATGCC}$ TGGCCCAGGACTGAGGGATGTTTTGAAGCCTGAGATGCATAAAATGTTGAGACTGTGAGGACTTCACCTTCTAGA TAAGGAAGCAGATACCAGGGAGGAGGTTAGACTTGCCAGGGTGAGTGGGATAGTGTGGGGCAGGGCTGAAATAGA CTTTGAGATTTAAAAAGACTAGGATTTGAACCCTGGGTAATGAATTATGTGATTTGGATAAGTTCTTAAACTGTG TTCAAGGAATAAGAAATATTTCTTAGGGTTTTGTAACCTAATAAGTTTGGGAACTACTGGGCTAAACAGAGTTAC ATCTGTTTCACTTTCGGGCTTCTCAGATTGTGTAATATGCTAATGGATGTTACCATCCAGAAGGAACATGCAGTG TTTCCTAAACTTAAAACCACAATTAGCCAGGTGTGGTGGCATGCACCTATAGTCCCAGTTACTTGGGGGGCCGAG GTGGGAGGATCGCTTGAGCCTGGAAGATCGAGACTAGTGAGCCATCATCATGCCACTGCACTTCAGCCTGGGTGA ATCAGTAAATAAGAAAAACACAGCCTGGGCCACATAGCAAGACCTGGTCTCTACAAAAAATTTTAAAAATGAGCC AGGCATGGTGGTACACGCCTGTAGTCCTAGCTCCTTAGGAGGCTGTGGCAGGAGAACTGCTTGAGCCTAGGAGAT GGAGGCTGATGTGAGCTGTGATTGAGTTTGCTGCGAGGTGGAATGAGATGAAGGGGTATGGAAAGTGTTACACCC AGTGCCTAGCTCATGACAGATGCCCAGTAAATGGTGGGTCCCCTCCCCATCTAAGGAAAAACTGACAAGAATTTT GTGAACTCTGCCTCCTCCAACCCCCCTGCCGAAGTGGACCCTGACACCATCCTGAAGGCACTCTTCAAGTCC TCAGGGGCCTCTGTGACCACGCAGCCCACAGAATTCAAAATCAAGCTTTGAGCAGGGGAGTGAGGCAGCCAGAAG TGGGGGCAGAGGGTGGCTCTGTTTCCCCAAGGCAAAGCTTATGACCAATGGGCCATCGGACTGGAGACCCCT GATTGTGGGAAGGGTTGCCAGGGATAAAGAGCTTCCTCACTGGATGGGACCCGCCTTTCTGTGTTGTGTTCTGCC CTGTGCTCTTCTCTCTACGTTAACGTTTCCTGTAGTATGTTTCTTCATCTCATCGCCAAGGTAGGCTTGTGTTTT TCAGTGTGTGCCTCCCCGAGCCTCAGCCCCAAGCTGATTTCTTATCTGGAAATGGTACACTGAATTCTCTGGGTG GCTTTCTTGTGGCCCCATGGGATGCAGCGTGGGGGCCTGTCTGAAGGACCCTGCTTTTTCCAGGGGCCGAGGGGCT GCCTTTCCTTTGTGTGTATTAAGCTTTTCAAACAATGGAGGGGATGGAGAGCCCTGGTGTCCTGACGGGAGCCAG TGTCCTCTCCCCAGTGGCTCCAGGCCTCACTAGTGGCAAGGGCAGGATGAGGCTGCACCGCTGGGAAGAGTCTAT CTAAGCTCTTGGCTTGGAGTCCCGTGTCGTCTCCACCCAGAGGAAGTTCTCCAGAGTTCACCTTTTCCT TGAGTTGTGCTGAATGCCCCACCCCAGCTCTCTTTCCCTTCTGGGTGTCTTTGCTGGGAGGGGGCTGTGTTGTGA GCCCTCCCGGTTCTCACCTCGCCTGGCACTTAACCACACCCTGGTTTTGTGTAGCCGCCAGCTCTCTTCTGGTTG GGCCTTTGAAAGGCTCAGCCTCCCATTGTGCAGTGCTTGGGTTTGGAGCTTATTTGAATGGAAGAGGTCAGTTTG TTCCTGGCTCTCCATTTCTGGCCTCAGTTGTCTACAGGACAGTGGTCAGGGATGCCTGGAGGCATATATCCAGCT CCTTGGCAGAGGAGGAGGAGTCAAGGGAGCAGGCAGCTCTACCAGGCAAGGTGTTTCCCCCAGCATAGGCGCAGA CAGTTGGGACGAAACTTCAGAGCCCAGGCAGTCCCTGAATGACCAGGCCAGTGTTGTCACTGAGTGGTCCCCTGC TGGTTGGGAGTGAAGAATCCAGGCTGGCAGAGCTGGAGCCAGTTGGGGAGCACGGTTCTGGGAGCTCTGCAAA ATCAGTAGCAAGTGCTGGAAAAGGCACATGCCGAAGATACTCAAGAGCTCCCAAGATTTGCTTGAGGCTAGCCCA CTTTAAAGAATGCTGCTTTTATTCTCCTAACCCTTTCAAGTGGGTGCAGACTTCTCGTTAGCAGCTGGAAGACA TTCCTCCCACACTTTTCCCTTCCTGGCCCAAGAGAGCATCCAGAAGGCAGTAGGACCTGGTTTTCAGGTACTGG GAGCCGGGGGCTCACTGCTTGCACTGTGCTTAGGGTAGGGATGGTAAATATCCTCCCTGCATGGCTTTATCCTCC CTCTCATCCCAAAGCAGGTATCTTCTGGTTGTCACAGAGTTTCATTGAGTCCAGCTGCAGCCACGTGGCCATCTG

6597/6881 FIGURE 6090B

GAGCTGGTGCTATAGGTGACCATCTGGTACATTGAGGGGACCTGTTTGCCTCCTCCACTCTATAAGCAGTCATCT TGGGAGACCGGGAGGAGAGGTGGTGGGCTAGTCCTGTGTCCTCCACTTCCCATGCCTCTATGTTACCCATC TGTGTCTCCTGTGCAGAAGGAGGAAGGGGCATTAAGAGATGAAGGGTGATTATGTATTACTTATCCATTTCTG TCTGTTGCCAAGGCTGGAGTGCAGTGGCACTATCTCAGCTCACTGCAACCTCCGCAGCCAGACTCAAGTAATCCT CCCACCTCAGCCTCCCAATTAGCTGGGACTGCAGGCGTGCATCACCATGTCTGGCTAATTTTTGTAGAGATGAGG TTTCACCATGTTGCACAAGCTGGTCTTGAAATCCTGACCTCAGGTGGTCTGCCTCGGCCTCCCAAAGTTGG AATTAACAGGCGTGAGCCACCCACGCCAGGCCAAGGGTTTTAATCTTGCAGGGATTTCAACATTTGGGGTGGAACT TAATTATTTAAAAAATAGAGACAGATTCTTGCTATGATACCCAGGATGGTCTTGAACTCCTGGGCACAAGTGATC CTCCTGCTTCAGCCTCTCAAAGTGTTGGAGTTACAGGCATGAGCCACTGCTCCCCACCAGGGATGCAAATTACTT GATACTCCTCTCCAGAAGGTGGGGTCCTGTGCCCCTCCTGAACCCAAGTGTGCTCTGTTACTACTTTGACCAGAT GTGACTCTGCCATTTCTGTGCCTAGGCTTTTAAAGATGGTCACTTCTCCATTTCCTGTGCCTGGAACATTCTCTG GGAGCCTTGACACCACATTTGAAGTTGCCTATTGGGGCCCAGCATGGTGGCTCACGCCTGTAATCCCAGCACTTCA GAAGGCCGAGGCAGGCAGATCGCATGAAATCAGGAGTTTGAGACCAGCCTAACCAACGTGGTAAAAACCCTGTCTC TACTAAAAATTACAAAAATTAGAGGGGCGCGGTGGTGGGCGCTTGTAATCCCAGCTATTCAGGAGGCTGAGGCAG GAGAATCACTTGAACCCGGGAGGCGGAGTTTGCAGTGAGGTGAAATCACGCCACTGCACTCCAGCCTGTGCAACA GAGCGAGGCTCTGTCTCAAAAGAAAAAAAATAGTTGACTGTCGGTTTGGCATGGTGGCTCATGCCTCTTGTCCCA GCACTTTGGGATGCTGAGGCAGGAAGATTACTGGAGCTCAGGAGTTCGAGACCAGCTTGGGCAATATAGTGAAGC CCTATCTTTACAAAAACGAAAAATTAGCTCAGCTACTCAGGAGCCTGAAATGGAGGATCATTTGTGCCCAGGAG AAATAGTTGACTATTGAGTCTCATATCTGATTGCCCACCTGACATCTCCCCTGAGTGGCCTAATGGGCATCTCAC ATGGCAACACCATCCTCTTAGTTGCTCAGACTGAAAAGCTAGCAGCCATCCTGGATTTCTCTCACACTGCCTATT CAACGTGTGAATGCATGAGTGGAAAGCTGAGTTCGCACTCGTGACTGGCCGGGGTCGACTCTGACATTCACTCCC AGCGAGGGGGCGGGCAGCAAAAACGCGCTCGCGCGCGCCGAACCGCAACTCCCGGCGACCCCGCG CTCCCGGGTGGCAAGATGGTGGCGCGCAGGACGAAGCTCGCGGCGCGCGGACCCGGAGGACGGTATCCCGAGCCCA CCGTGCTACGCAGGTGAGGGGATCCGGAACGCGAGACCGGGGGGGCGCCAGCATCGCCGGGAGGTGTTTGGGGGGCT GGCGGCGGGGGGTCCCCAGGAGCGGCCGC

ACTGCTTTCGGCTTGCTCGGCGGAGCAAGATGGCGGACATCTCCCTGGACGAACTCATCAGGAAGCGCGGGGCGG $\tt CGGCGAAAGGACGGCTTAATGCCAGACCGGGAGTTGGAGGTGTCCGATCTCGAGTTGGGATCCAGCAAGGCCTTC$ TCAGCCAGTCAACACGCACAGCCACCTTCCAGCAGAGATTTGATGCCCGGCAGAAGATTGGCCTCTCAGATGCCC GGCTCAAACTGGGAGTCAAGGATGCCCGGGAGAAGCTTTTGCAGAAAGATGCCCGATTTCGAATCAAAGGGAAAG TGCAGGATGCCAGAGAGATGTTGAACTCTCGCAAGCAGCAGACCACGGTGCCCCAGAAGCCCCGCCAGGTTGCTG CTGCTCTGAAGCTCACCAAAACCATCCAGGTTCCACAGCAGAAAGCCATGGCACCACTTCATCCCCATCCTGCCG GAATGAGAATCAATGTTGTCAATAACCACCAGGCCAAACAGAATTTATATGACCTGGATGAAGATGATGATGGTA TAGCTTCCGTTCCTACTAAACAGATGAAGTTTGCAGCCTCAGGCGGCTTTCTCCACCACATGGCTGGGCTAAGCA GTTCCAAGCTTTCCATGTCCAAGGCCCTCCCTCTCACCAAAGTGGTTCAGAATGATGCATACACAGCTCCTGCTC TCCCTTCCTCTATTCGAACAAAAGCCTTGACCAACATGTCCCGGACACTGGTGAACAAGGAAGAACCCCCCAAAG AGCTGCCAGCTGCTGAGCCTGTTCTCAGCCCATTGGAAGGCACCAAGATGACTGTGAATAATCTGCACCCTCGAG TCACTGAGGAGGACATTGTTGAGCTTTTCTGTGTGTGTGGGGCCCTCAAGCGAGCTCGACTGGTCCATCCTGGGG TAGCGGAGGTGTTTTGTGAAAAAGGACGATGCCATCACCGCATATAAGAAGTACAACCAGCTGTCTGGACG GGCAGCCGATGAAGTGCAACCTTCACATGAATGGGAATGTTATCACCTCAGACCAGCCCATCCTGCTGCGGCTGA GTGACAGCCCATCAATGAAAAAGGAGAGCGAGCTGCCTCGCAGGGTGAACTCTGCCTCCTCCCAACCCCCCTG CCGAAGTGGACCCTGACACCATCCTGAAGGCACTCTTCAAGTCCTCAGGGGCCTCTGTGACCACGCAGCCCACAG AATTCAAAATCAAGCTTTGAGCAGGGGAGTGAGGCAGCCAGAAGTGGGGGCAGAGGAGGGGGGCTCTGTTTCCCC AAGGCAAAGCTTATGACCAATGGGCCATCGGACTGGAGACCCCTGATTGTGGGAAGGGTTGCCAGGGATAAAGAG GTAGTATGTTTCTTCATCTCATCGCCAAGGTAGGCTTGTGTTTTTCAGTGTGTGCCTCCCCGAGCCTCAGCCCCA AGCTGATTTCTTATCTGGAAATGGTACACTGAATTCTCTGGGTGGCTTTCTTGTGGCCCCATGGGATGCAGCGTG GGGGCTGTCTGAAGGACCCTGCTTTTTCCAGGGGCCGAGGGGCTGCCTTTCCTTTGTGTGTATTAAGCTTTTCAA ACAATGGAGGGGATGGAGACCCTGGTGTCCTGACGGGAGCCAGGTCGGCCTGAGAGCTGTGCCGCTCCTCTGTC TTGTCAGTGGAGGTGCCTGGGTGGGGAGCAGGTCTCAGGCCTCTTGTCCTCTCCCCAGTGGCTCCAGGCCTCACT TCCACCCAGAGGAAGTTCTCCAGAGTTCACCTTTCCCTTTTCCTTGAGTTGTGCTGAATGCCCCACCCCAGCTCT CTTTCCCTTCTGGGTGTCTTTGCTGGGAGGGGGCTGTGTTGTGAGCCCTCCCGGTTCTCACCTCGCCTGGCACTT AACCACACCCTGGTTTTGTGTAGCCGCCAGCTCTCTTCTGGTTGGGCCCTTTGAAAGGCTCAGCCTCCCATTGTGC AGTGCTTGGGTTTGGAGCTTATTTGAATGGAAGAGGTCAGTTTGTTCCTGGCTCTCCATTTCTGGCCTCAGTTGT TGTGAGTGACCCCATCCATCCATGACCAGAGGATTATTTTCCTGCCTTGGCAGAGGAGGAGGAGTCAAGGGAGCA GGGCAGCTCTACCAGGCAAGGTGTTTCCCCAGCATAGGCGCAGACAGTTGGGACGAAACTTCAGAGCCCAGGCAG TCCCTGAATGACCAGGCCAGTGTTGTCACTGAGTGGTCCCCTGCTGGTTGGGAGTGAAGAATCCAGGCTGGCA GAGCTGGAGCCAGTTGGGGAGCACGGTTCTGGGAGCTCTGCAAAATCAGTAGCAAGTGCTGGAAAAGGCACATGC GGTCAGTCTGTCAGGCAGGAAGGACCCAGGATTTGAACCCAGCTTCAGTGTGCAGGCTCTGAGGCTGCCCAGGAC GGGAAAGTCCAAGGAAGGGGCCTGGTGGTGCTCCACTTGCAGTTCTTTAAAGAATGCTGCTTTTTATTCTCCTAA CCCTTTCAAGTGGGTGCAGACTTCTCGTTAGCAGCTGGAAGACATTCCTCCCACACTTTTCCCTTCCTGGCCCAA GAGAGCATCCAGAAGGCAGTAGGACCTGGTTTTTCAGGTACTGGGAGCCGGGGGCTCACTGCTTGCACTGTGCTT TCACAGAGTTTCATTGAGTCCAGCTGCAGCCACGTGGCCATCTGGAGCTGGTGCTATAGGTGACCATCTGGTACA TTGAGGGGACCTGTTTGCCTCCTCCACTCTATAAGCAGTCATCTTGGGAGACCGGGAGGAGAAGGTGGTGGGCTA GTCCTGTGTCCTCCTCCACTTCCCATGCCTCTATGTTACCCATCTGTGTCTCCTGTGCAGAAGGAGAGGAAGGGA CATTAAGAGATGAAGGGTGATTATGTATTACTTATCCATTTCTGAATAAACATTTGTTATTCCT

MADISLDELIRKRGAAAKGRLNARPGVGGVRSRVGIQQGLLSQSTRTATFQQRFDARQKIGLSDARLKLGVKDAR EKLLQKDARFRIKGKVQDAREMLNSRKQQTTVPQKPRQVADAREKISLKRSSPAAFINPPIGTVTPALKLTKTIQ VPQQKAMAPLHPHPAGMRINVVNNHQAKQNLYDLDEDDDGIASVPTKQMKFAASGGFLHHMAGLSSSKLSMSKAL PLTKVVQNDAYTAPALPSSIRTKALTNMSRTLVNKEEPPKELPAAEPVLSPLEGTKMTVNNLHPRVTEEDIVELF CVCGALKRARLVHPGVAEVVFVKKDDAITAYKKYNNRCLDGQPMKCNLHMNGNVITSDQPILLRLSDSPSMKKES ELPRRVNSASSSNPPÄEVDPDTILKALFKSSGASVTTQPTEFKIKL

WO 2004/030615 PCT/US2003/028547

6601/6881 FIGURE 6094

GCCAGCCATCACCCTCGAGAGCCCGGACATCAAGTACCCGCTGCGGCTCATCGACCGGGAGATCATCAGCCATGA CACCCGGCGCTTCCGCTTTGCCCTGCCGTCACCCCAGCACATCCTGGGCCTCCCTGTCGGCCAGCACATCTACCT CTCGGCTCGAATTGATGGAAACCTGGTCGTCCGCCCTATACACCCATCTCCAGCGATGATGACAAGGGCTTCGT GGACCTGGTCATCAAGGTTTACTTCAAGGACACCCATCCCAAGTTTCCCGCTGGAGGGAAGATGTCTCAGTACCT GGAGAGCATGCAGATTGGAGACACCATTGAGTTCCGGGGCCCCAGTGGGCTGCTGGTCTACCAGGGCAAAGGGAA GTTCGCCATCCGACCTGACAAAAAGTCCAACCCTATCATCAGGACAGTGAAGTCTGTGGGCATGATCGCGGGAGG GACAGGCATCACCCCGATGCTGCAGGTGATCCGCGCCATCATGAAGGACCCTGATGACCACACTGTGTGCCACCT ACGCTTCAAGCTCTGGTACACGCTGGACAGAGCCCCTGAAGCCTGGGACTACGGCCAGGGCTTCGTGAATGAGGA GTACGCCTGCCTTCCCAACCTGGACCACGTGGGCCACCCCACGGAGCGCTGCTTCGTCTTCTGAGGGCCGGGCAC GGTCACACGGCCACCCGCGCGCACCCCACGCCCTGTTCACGCTCACCCAGTCACCTCCCCACATCGCACACT GGGGCCCCGGGTTCAGCCTGGCCTGCCCGTGCCCTGGTGAATCACCTGGCTGAGCAGTTCCCCTGGAGCCCCTTC TGCCAGCAGCCCGTCTGCCCACCATTCCCGGCCGTGGACCATAGTCGGGATGTCAGCAGACACACATGGGCAGC CCAAAGCTGCAGGTGCCAGGCCCACCCCAGCCTCGCCTGTCACCCCACTCCCGCCTCAGGGCCAGGCCCAGGC CTCACCACCTGACGCTGCATGAGACATTGACACCAGAAAGCCCTCTTGGGGGCACTGCTCCCTACCCCAGGGCCC TGGCCAGCCGGGAGCTTGGCTCTCCTCTGGCTAGAGTGGGAAGAGGGGGCTGGCCATGGGGCCCTCCCAGAACCT CAGCATTTCCTTCCAGCCCATCCAAACACTGAGGCAGCCTTGGGGGAACCCCGAGCTGGGGGGTTGGCAGCCCACT GCACCGCCTCAGGGTTTTGGGGTCCTGGGCTGGGGCCACCATCCCTGATGGCAGAACTCCCACAACCACATGTAT TTATTCCTCTGTCCTAAACCGTCCCTCCTTCCCTCACCCCAGCACAGGGGGATTCTGAGCAGTGCCTCTTGTC TGAGGGACATATCAGTGACCTCGACGTTGCCTTTAGACTACAGTTGTGTTAGCCTCTTGCGTATTGGCTTTTTCA GAGTCATTTATGAGCAGAAAAAAAAAAAGTAAAACTTTGCTAATATT

 ${\tt MAPHLLWCPTNGLGLGGSPAGQWGGGSHYRGLVPGEPAGRPPALPLPGLAGLRDHTQLLRMAGQPWLAWGTAAAR}\\ {\tt VSARPTRDCSCTSRCHHACDVVAVTLS}$

ATCGAGGCCGAGCGGGGTCCCGAGCGCCGGCCTGCGGAGCGTAGCAGCCCGGGCCAGACGCCGGAGGAGGGCGCG $\verb|CGCCTCCTGCACAAGCTGGAGCACGAGGTTTTCGACGCTGGGGAAGTGTTTGGGATCATGCAAGTGGAGGAGGTA|\\$ GAAGAGGAGGACGAGCCGGGAGGTGCGGAAGCAGCCCCAACCCGGGGAACGAGCTGTGCTACAAG GTCATCGTGACCAGGGAGAGCGGGCTCCAGGCAGCCCCAACAGCATCTTCCTCATCGACCACGCCTGGACG TGCCGTGTGGAGCACGCGCCCAGCAGCTGCAGCAGGTGCCCGGGCTGCTGCACCGCATGGCCAACCTGATGGGC ATTGAGTTCCACGGTGAGCTGCCCAGTACAGAGGCTGTGGCCCTGGTGCTGGAGGAGATGTGGAAGTTCAACCAG ACCTACCAGCTGGCCCATGGGACAGCTGAGGAGAAGATGCCGGTGTGGTATATCATGGACGAGTTCGGTTCGCGG ATCCAGCACGCGGACGTGCCCAGCTTCGCCACGCACCCTTCTTCTACATGCCGCAGCAGGTGGCCTACACGCTG CTGTGGCCCCTGAGGGACCTGGACACTGGCGAGGAGGTGACCCGAGACTTTGCCTACGGAGAGACGGACCCCCTG ATCCGGAAGTGCATGCTGCCCTGGGCCCCCACCGACATGCTGGACCTCAGCTCTTGCACACCCGAGCCGCCC GCCGAGCACTACCAGGCCATTCTGGAGGAAAACAAGGAGAAGCTGCCACTTGACATCAACCCCGTGGTGCACCCC ACCCAGAGTGAGGCGGACGCCGACATCCTCTTCAACTTCTCACACTTCAAGGACTACAGGAAACTCAGCCAGGAG AGGCCAGGCGTGCTGCAACCAGTTCCCCTGCGAGAACCTGCTGACTGTCAAGGACTGCCTGGCCTCCATCGCG CGCCGGGCAGGTGGCCCCGAGGGCCCACCCTGGCTGCCCCGAACCTTCAACCTGCGCACTGAGCTGCCCCAGTTT GTCAGCTACTTCCAGCAGCGGGAAAGGTGGGGCGAGGACAACCACTGGATCTGCAAGCCCTGGAACCTGGCGCGC AGCCTGGACACCCACGTCACCAAGAGCCTGCACAGCATCATCCGGCACCGAGAGAGCACCCCCAAGGTTGTGTCC AAGTACATCGAAAGTCCCGTGTTGTTCCTTCGAGAAGACGTGGGAAAGGTCAAGTTCGACATCCGCTACATCGTG CTGCTGCGGTCAGTGAGGCCCCTACGGTTGTTCGTGTATGATGTGTTCTGGCTGCGGTTCTCCAACCGGGCCTTT GCACTCAACGACCTGGATGACTACGAGAAGCACTTCACGGTCATGAACTATGACCCGGATGTGGTGCTGAAGCAG TCATCCCGGGCCATGTATGCCGTCGACCTCATGCTGAAGTGGGACAACGGCCCAGATGGAAGGCGGGTGATGCAG GTCTTCAGCACCTTGTTTCTGGACCAGCCCGGTGGCTGCCACGTTACCTGCCTTGTCTAGCACTCGCTGTCCCC ACACCGGCCCTGGGCATAGCCTCAGCCCCAGGCCTCTGTCCTGCCGAGCCATCCTCCCGGCGCCACACTCCGGGA GCACAGCATCCTCTCACCTGTGGGTCAGAGCAGGACAGTGATGGTGTCCCCAGGGCTGAGCACCACCCCACG CCCTGCCCTCACCCCCCACCACCATCTGTGCACTGATGAGTCTCCAGTTTAGCCAAGGGCTTTGTTCCTGGCATG GAGAATTTGTTCCTGGCTGCTGTTTTCCAGGGGGTGCTGGGGGAAGGGTTCCGTGGAGCGAGACAAGGTGTCCT CGGGAGCAGGGTTCCACCGGGAAGCGTTTGGGAGCCCTGTATCACACGGGGCAGGCGGGTTTCTCTTCCGGGGTC TCTGCTCTTATGCATCAGGACGACCCCGGGACGGCTGTGGGGCCCCACACTGCACCCACAGGGCTCTATGCGACA GGGGCCCAGGACAGCCTGAGGCCACCACCAGCAAGCCCGCCTTATCACCCATTCCAGCTCACCCAGAACCTTC ACCAGCAAACCTCCTGCTGAGGTCCTGGCAGGAGGCCACCGTCTTGTTACCGTTTTCCTTTTCGTTTGCTGAGGGT CACAGACCCCAACAGGGAAATCAGTATCTGTCTTCCCAGTGGTTGCCCTGCTCGCCGGGCACTCCACGGGGTCCC GCCCTTGTGTGAGATGGGCCAGGATCCTTCGGCAAGGGGCGCCTGGGGCTGATTGTGGGCGGTGGAGCG CCAGACAGAAAAGGATTCCAATGAGAACTTCAGGTTAAAGTCAGATGCCACCTACCAGGGTCTACAGTCAAAATG TTGGCTTTTTCTTATTTTTTAATGTATGGGAGAAAAATGTAAAATTCCAGTTCTTTTCTAATTGTGTTTCTGAAA ACTGCCCAGGCAGGCGAGAGCTACTTCCAGAGCCTTCCAGTGCATGGGAGGGCAGGGCTAGGTGTAGCGGTGTCT CTGGGCCCTTGTTTACAAGCACGCGTTACCCTTCCTGAGGGGAGCCATGCTCTAGCCCCTGGAGGGCCTGTTGCA GGGGCAGGGCGGGCCCGTCGCCTTTGGCAGCTCCTGGAGAGCTGTGGACATGCAGTCCCCCTCAGTTCGTGCTGC AATAAAGGCCATCTTCTCTTA

FIGURE 6098

MEAERGPERRPAERSSPGQTPEEGAQALAEFAALHGPALRASGVPERYWGRLLHKLEHEVFDAGEVFGIMQVEEV EEEEDEAAREVRKQQPNPGNELCYKVIVTRESGLQAAHPNSIFLIDHAWTCRVEHARQQLQQVPGLLHRMANLMG IEFHGELPSTEAVALVLEEMWKFNQTYQLAHGTAEEKMPVWYIMDEFGSRIQHADVPSFATAPFFYMPQQVAYTL LWPLRDLDTGEEVTRDFAYGETDPLIRKCMLLPWAPTDMLDLSSCTPEPPAEHYQAILEENKEKLPLDINPVVHP HGHIFKVYTDVQQVASSLTHPRFTLTQSEADADILFNFSHFKDYRKLSQERPGVLLNQFPCENLLTVKDCLASIA RRAGGPEGPPWLPRTFNLRTELPQFVSYFQQRERWGEDNHWICKPWNLARSLDTHVTKSLHSIIRHRESTPKVVS KYIESPVLFLREDVGKVKFDIRYIVLLRSVRPLRLFVYDVFWLRFSNRAFALNDLDDYEKHFTVMNYDPDVVLKQ VHCEEFIPEFEKQYPEFPWTDVQAEIFRAFTELFQVACAKPPPLGLCDYPSSRAMYAVDLMLKWDNGPDGRRVMQ PQILEVNFNPDCERACRYHPTFFNDVFSTLFLDQPGGCHVTCLV

PCT/US2003/028547

6606/6881 FIGURE 6099

GCGGGGAATCATGGCCGCCCCAGTGTTCCGCGTCCGGGGGTTTGTGGGAGTTGCCTTGACCTGCAGCTCCGCCA AGGGAACCATGGGGACTGTGCACGCCCGGAGTTTGGAGCCTCTTCCATCAAGTGGACCTGATTTTGGAGGATTAG GAGAAGAAGCTGAATTTGTTGAAGTTGAGCCTGAAGCTAAACAGGAAATTCTTGAAAAACAAGATGTGGTTGTTC AACATGTTCATTTTGATGGACTTGGAAGGACTAAAGATGATATCATCATTTTGTGAAATTTGGAGATGTTTTCAAGG CCAAAAACCTAATTGAGGTAATGCGGAAATCTCATGAAGCCCGTGAAAAATTGCTCCGTCTTGGAATTTTTAGAC AAGTGGATGTTTTGATTGACACATGTCAAGGTGATGACGCACTTCCAAATGGGTTAGACGTTACCTTTGAAGTAA CTGAATTGAGGAGATTAACGGGCAGTTATAACACCATGGTTGGAAACAATGAAGGCAGTATGGTACTTGGCCTCA AGCTTCCTAATCTTCTTGGTCGTGCAGAAAAGGTGACCTTTCAGTTTTCCTATGGAACAAAAGAAACTTCGTATG AGTTCCCTTGGAGCTCACTGCGGGAGACGGACAGAGGAATGTCAGCTGAGTACAGTTTTCCCATATGGAAGACCA GCCACACTGTCAAGTGGGAAGGCGTATGGCGAGAACTGGGCTGCCTCTCAAGGACGGCGTCATTTGCTGTTCGAA AAGAAAGCGGACATTCACTGAAATCATCTCTTTCGCACGCCATGGTCATCGATTCTCCGAAATCTTCCCATCTTAC CAAGGAGAGGTGCTTTGCTGAAAGTTAACCAGGAACTGGCAGGCTACACTGGCGGGGATGTGAGCTTCATCAAAG AAGATTTTGAACTTCAGTTGAACAAGCAACTCATATTTGATTCAGTTTTTTCAGCGTCTTTCTGGGGCGGAATGT TGGTACCCATTGGTGATAAGCCGTCAAGCATTGCTGATAGGTTTTACCTTGGGGGACCCACAAGCATCCGCGGAT ACCTCTACACCCCATTACCTTTCCGGCCAGGCCAGGCTTTGGAGAACTTTTCCGAACACACTTCTTCTCA GCTGGTCGTACGGGGCCGGGATTGTCCTCAGGCTTGGCAACATCGCTCGGTTGGAACTTAATTACTGCGTCCCCA TGGGAGTACAGACAGGCGACAGGATATGTGATGGCGTCCAGTTTGGAGCTGGGATAAGGTTCCTGTAGCCGACAC CCCTACAGGAGAGCTCTGGGACTGGGGCAGCAGCAGGCCCCATGCCACACCCGTCTCTCGAGGAAACGCGG TTCAGCGATTCTTTGACTGCGGACCCTGTGGGAAACCCCGTCAATAAATGTTAAAGACACACTC

MGTVHARSLEPLPSSGPDFGGLGEEAEFVEVEPEAKQEILENKDVVVQHVHFDGLGRTKDDIIICEIGDVFKAKN LIEVMRKSHEAREKLLRLGIFRQVDVLIDTCQGDDALPNGLDVTFEVTELRRLTGSYNTMVGNNEGSMVLGLKLP NLLGRAEKVTFQFSYGTKETSYGLSFFKPRPGNFERNFSVNLYKVTGQFPWSSLRETDRGMSAEYSFPIWKTSHT VKWEGVWRELGCLSRTASFAVRKESGHSLKSSLSHAMVIDSRNSSILPRRGALLKVNQELAGYTGGDVSFIKEDF ELQLNKQLIFDSVFSASFWGGMLVPIGDKPSSIADRFYLGGPTSIRGFSMHSIGPQSEGDYLGGEAYWAGGLHLY TPLPFRPGQGGFGELFRTHFFLNAGNLCNLNYGEGPKAHIRKLAECIRWSYGAGIVLRLGNIARLELNYCVPMGV QTGDRICDGVQFGAGIRFL

ATGGAGCCGGAGTTCTTGTACGACCTGCTGCAGCTCCCCAAGGGGGTGGAGCCCCCAGCGGAGGAGGAGCTCTCA
AAAGGAGGAAAGAAATACCTGCCACCCACTTCCCGGAAGGACCCCAAATTTGAAGAACTGCAGAAGGTGTTG
ATGGAGTGGATCAATGCCACTCTTCTCCCCGAGCACATTGTGGTCCGCAGCCTGGAGGAGCACATGTTCGACGGG
CTCATCCTACACCACCTATTCCAGAGGCTGGCGGCGCTCAAGCTGGAAGCAGAGGACATCGCCCTGACAGCCACA
AGCCAGAAGCACAAGCTCACAGTGGTGCTGGAGGCCGTGAACCGGAGTCTGCAGCTGGAGGAGGCCAAG
TGGAGCGTGGAGAGCATCTTCAACAAGGACCTGTTGTCTACCCTGCACCTCCTTGTGGCCCTGGCCAAGCGCTTC
CAGCCCGACCTCTCCCTCCCAACCAACGTCCAGGTGGAGGTCATCACTATCGAGAGCACCAAAAGTGGTCTGAAG
TCAGAGAAGTTGGTGGAACAGCTCACTGAATACAGCACAGACAAGGACGAGCCTCCCAAAGGACGTCTTTGATGAA
TTATTTAAGCTGGCTCCGGAGAAAGTGAACGCAGTGAAAAGGGCCATCGTGAACTTTGTCAACCAGAAGCTGGAC
CGCCTGGGCCTGTCTGTGCAGAATCTGGACACCCAGTTTGCAGCACTCCCCAACTCTTACTCTTGCTGATTGGACAA
CTTGAAGGCTTCTTCCTGCACTTAAAGGAATTCTACCTCACTCCCAACTCTCCTGCAGAAATGCTGCACAAACGTC
ACCCTGGCGCTGGAGCTGCTGAAGGACGAGGGCCTGCTCAGCTCCCTGAAGATATCGTGAACAAG
GATGCCAAGAGCACACTGCGGGTGCTCTATGGTCTGTTCTGCAAGCACCAGGGACACCAGGACAGCCC
CCCCATGGAGCCCCGAAT<u>TGA</u>

MEPEFLYDLLQLPKGVEPPAEEELSKGGKKKYLPPTSRKDPKFEELQKVLMEWINATLLPEHIVVRSLEEDMFDG LILHHLFQRLAALKLEAEDIALTATSQKHKLTVVLEAVNRSLQLEEWQAKWSVESIFNKDLLSTLHLLVALAKRF QPDLSLPTNVQVEVITIESTKSGLKSEKLVEQLTEYSTDKDEPPKDVFDELFKLAPEKVNAVKEAIVNFVNQKLD RLGLSVQNLDTQFADGVILLLLIGQLEGFFLHLKEFYLTPNSPAEMLHNVTLALELLKDEGLLSCPVSPEDIVNK DAKSTLRVLYGLFCKHTQKAHRDRTPHGAPN

CTGAGCCTCTCCGTGCAATGATTAACCCGGCGGGGCGGCGCGGGGACCCGAGACGGAGGCGCGGGGCCGGGG CGGGACCCCGCAGGACCGCTCGGCTTCCTCGCCGGAGTTTCCGCGTAGAGGGCGCATCGCCGGCCCGGGG CGGACGAGCGGGCACGCAGCAGCAGCCGGGCCTGCGCCAACGCCACCTGGAACAGCATCCACAACGGGGTGATCG CAGAGCTGGGGTCCTTCTCACGGAGTACCTGCAGAACCAGCTGCTGACAAAAGGCATGGTGATCCTTCGGGACA CCTCGGTGGTGCCCATGGCTGGCCAGGATCCTGCGCTGAGCACGAGTCACCCGTTCTACGACGTGGCCAGACATG GCATTCTGCAGGTGGCAGGGGATGACCGCTTTGGAAGACGTGTTGTCACGTTCAGCTGCCGGGATGCCACCCT ${\tt CCCACGAGCTGGACCACCAGCGGCTGCTGGAGTATTTGAAGTACACCTGGACCAATACGTTGAGAACGATTATA}$ AGTTCGATAGGAAAGACGGGGATCTCACTATGTGGCCCAGGCTGGTCTCGAACTCCAAGCTCAAGCGATCCTCCC ACCTCAGCCTCCCAAAGTACTGGGATTACAGGTACAAGAAGAACTTGAAGGCCCTCTACGTGGTGCACCCCACCA GCTTCATCAAGGTCCTGTGGAACATCTTGAAGCCCCTCATCAGTCACAAGTTTGGGAAGAAAGTCATCTATTTCA ${\tt CACAGCAGTTTGGCGTCAGTCTGCAATACCTCAAAGACAAAAATCAAGGCGAACTCATCCCCCCTGTGCTGAGGT}$ TCCGCGAGATCCAGAGGCTCTACAACCAAGGGAAGCCCGTGAACTTTGACGACTACGGGGACATTCACATCCCTG CCGTGATCCTGAAGACCTTCCTGCGAGAGCTGCCCCAGCCGCTTCTGACCTTCCAGGCCTACGAGCAGATTCTCG GGATCACCTGTGTGGAGAGCAGCCTGCGTGTCACTGGCTGCCGCCAGATCTTACGGAGCCTCCCAGAGCACAACT ACGTCGTCCTCCGGTACCTCATGGGCTTCCTGCATGCGGTGTCCCGGGAGAGCATCTTCAACAAAATGAACAGCT CTAACCTGGCCTGTGTCTTCGGGCTGAATTTGATCTGGCCATCCCAGGGGGTCTCCTCCCTGAGTGCCCTTGTGC CCCTGAACATGTTCACTGAACTGCTGATCGAGTACTATGAAAAGATCTTCAGCACCCCGGAGGCACCTGGGGAGC ACGGCCTGGCACCATGGGAACAGGGGAGCCAGGCCCCTTTGCAGGAGGCTGTGCCACGGACACAAGCCACGG GCCTCACCAAGCCTACCCTACCTCCGAGTCCCCTGATGGCAGCCAGAAGACGTCTCTAGTGTTGCGAACACTCTG TATATTTCGAGCTACCTCCCACACCTGTCTGTGCACTTGTATGTTTTGTAAACTTGGCATCTGTAAAAATAACCA GCCATTAGATGAATTCAGAACCTTCTAATGAAAACTCCATGCCTCTGGTCCTTGGACTCTTGTCCATGGTTCCTG AGCTGTGGACCGGGATAGAAT

GGCCCAGGCTGAAGCTCAGGGCCCTGTCTGCTCTGTGGACTCAACAGTTTGTGGCAAGACAAGCTCAGAACTGAG AAGCTGTCACCACAGTTCTGGAGGCTGGGAAGTTCAAGATCAAAGTGCCAGCAGATTCAGTGTCATGTGAGGACG ${\tt TGCTTCCTGCTTCATAGATAAGAGCTTGGAGCTCGGCGCACAACCAGCACCATCTGGTCGCG} {\color{red} \underline{ATG}} {\tt GTGGACACGG}$ AAAGCCCACTCTGCCCCCTCTCCCCACTCGAGGCCGGCGATCTAGAGAGCCCGTTATCTGAAGAGTTCCTGCAAG AAATGGGAAACATCCAAGAGATTTCGCAATCCATCGGCGAGGATAGTTCTGGAAGCTTTGGCTTTACGGAATACC AGTATTTAGGAAGCTGTCCTGGCTCAGATGGCTCGGTCATCACGGACACGCTTTCACCAGCTTCGAGCCCCTCCT CGGTGACTTATCCTGTGGTCCCCGGCAGCGTGGACGAGTCTCCCAGTGGAGCATTGAACATCGAATGTAGAATCT GCGGGGACAAGGCCTCAGGCTATCATTACGGAGTCCACGCGTGTGAAGGCTGCAAGGGCTTCTTTCGGCGAACGA TTCGACTCAAGCTGGTGTATGACAAGTGCGACCGCAGCTGCAAGATCCAGAAAAAAGAACAGAAACAAATGCCAGT ATTGTCGATTTCACAAGTGCCTTTCTGTCGGGATGTCACACACGCGATTCGTTTTGGACGAATGCCAAGATCTG AGAAAGCAAAACTGAAAGCAGAAATTCTTACCTGTGAACATGACATAGAAGATTCTGAAACTGCAGATCTCAAAT CTCTGGCCAAGAGAATCTACGAGGCCTACTTGAAGAACTTCAACATGAACAAGGTCAAAGCCCGGGTCATCCTCT CAGGAAAGGCCAGTAACAATCCACCTTTTGTCATACATGATATGGAGACACTGTGTATGGCTGAGAAGACGCTGG TGGCCAAGCTGGTGGCCAATGGCATCCAGAACAAGGAGGCGGAGGTCCGCATCTTTCACTGCTGCCAGTGCACGT CAGTGGAGACCGTCACGGAGCTCACGGAATTCGCCAAGGCCATCCCAGGCTTCGCAAACTTGGACCTGAACGATC AAGTGACATTGCTAAAATACGGAGTTTATGAGGCCATATTCGCCATGCTGTCTTCTGTGATGAACAAAGACGGGA TGCTGGTAGCGTATGGAAATGGGTTTATAACTCGTGAATTCCTAAAAAAGCCTAAGGAAACCGTTCTGTGATATCA TGGAACCCAAGTTTGATTTTGCCATGAAGTTCAATGCACTGGAACTGGATGACAGTGATATCTCCCTTTTTGTGG CTGCTATCATTTGCTGTGGAGATCGTCCTGGCCTTCTAAACGTAGGACACATTGAAAAAATGCAGGAGGGTATTG TACATGTGCTCAGACTCCACCTGCAGAGCAACCACCCGGACGATATCTTTCTCTCCCCAAAACTTCTTCAAAAAA TGGCAGACCTCCGGCAGCTGGTGACGGAGCATGCGCAGCTGGTGCAGATCATCAAGAAGACGGAGTCGGATGCTG TTAGAGCTTGGACAGTCTGAGCTGTAGGTAACCGGCATATTATTCCATATCTTTGTTTTAACCAGTACTTCTAAG AGCATAGAACTCAAATGCTGGGGGAGGTGGCTAATCTCAGGACTGGGAAG

MVDTESPLCPLSPLEAGDLESPLSEEFLQEMGNIQEISQSIGEDSSGSFGFTEYQYLGSCPGSDGSVITDTLSPA SSPSSVTYPVVPGSVDESPSGALNIECRICGDKASGYHYGVHACEGCKGFFRRTIRLKLVYDKCDRSCKIQKKNR NKCQYCRFHKCLSVGMSHNAIRFGRMPRSEKAKLKAEILTCEHDIEDSETADLKSLAKRIYEAYLKNFNMNKVKA RVILSGKASNNPPFVIHDMETLCMAEKTLVAKLVANGIQNKEAEVRIFHCCQCTSVETVTELTEFAKAIPGFANL DLNDQVTLLKYGVYEAIFAMLSSVMNKDGMLVAYGNGFITREFLKSLRKPFCDIMEPKFDFAMKFNALELDDSDI SLFVAAIICCGDRPGLLNVGHIEKMQEGIVHVLRLHLQSNHPDDIFLFPKLLQKMADLRQLVTEHAQLVQIIKKT ESDAALHPLLQEIYRDMY WO 2004/030615 PCT/US2003/028547

6613/6881 FIGURE 6106A

CAACTTCCGGAAGGAGGCGGAAGAGCTTCTCGGCTCTAGGCTCTGGAGTCCCGGGAGCAGTGAGGGGCCCACCCGG GGCACAGGAAAGGGCCGCTAGGGGAGGGCCGGGTGCACTCGGGGTGTCTGGGCCGCGGGTCTGAGGGATGAGGAG GGGCCATGGCCAGCGACGGGGCCAGGAAGCAATTCTGGAAGCGCAGCAACAGCAAGCTCCCGGGCAGCATCCAGC ACGTGTATGGTGCCCAGCACCCCCCTTTGATCCACTGTTACATGGCACTTTGCTCAGGTCCACGGCCAAGATGC CGACCACACCAGTGAAGGCCAAGAGGGTCAGCACCTTCCAGGAGTTTGAGAGCAATACCAGCGATGCCTGGGACG CTGGGGAGGACGACGATGAGCTCCTGGCCATGGCGGCGGAGAGCCTGAACTCCGAGGTGGTCATGGAGACGGCCA ACCGTGTGCTGCGTAACCACAGCCAGCGGCAGGGGCCCACGCTGCAGGAGGGGCCAGGGCTTCAGCAGAAGC CCAGGCCGAGGCAGAGCCGCCCTCACCCCCAGCGGCGACCTCCGGCTGGTGAAGTCGGTCAGTGAGAGCCACA CGTCCTGTCCTGCAGAAAGTGCCAGCGATGCCGCCCCTCTGCAGAGGTCCCAGTCTCTCCCACACTCGGCCACCG TCACGCTGGGTGGCACATCTGACCCCAGCACTCTCAGCAGCTCAGCGCTGAGCGAAAGAGAGGGCCTCCCGGCTCG ACAAGTTCAAGCAGCTGCTTGCCGGCCCCAACACGGACCTTGAGGAATTACGGAGGTTGAGCTGGTCCGGAATCC CTAAGCCAGTGCGTCCAATGACGTGGAAGCTCCTCTCAGGTTACCTTCCCGCCAATGTAGACCGGAGACCAGCCA CTCTCCAGAGAAAACAAAAAGAATATTTTGCATTTATTGAGCACTATTACGATTCTAGGAACGACGAAGTTCACC AGGACACATACAGGCAGATCCACATAGACATCCCTCGCATGAGCCCTGAAGCGTTGATCCTGCAGCCCAAGGTGA ATCTCGTCACTCCTTTCTTTGTGGTCTTCATTTGTGAATACATAGAGGCAGAGGAGGTGGACACGGTGGACGTCT CCGGCGTGCCCGCAGAGGTGCTGTGCAACATCGAGGCCGACACCTACTGGTGCATGAGCAAGCTGCTGGATGGCA TTCAGGACAACTACACCTTTGCCCAACCTGGGATTCAAATGAAAGTGAAAATGTTAGAAGAACTCGTGAGCCGGA TTGATGAGCAAGTGCACCGGCACCTGGACCAACACGAAGTGAGATACCTGCAGTTTGCCTTCCGCTGGATGAACA ACCTGCTGATGAGGGAGGTGCCCCTGCGTTGTACCATCCGCCTGTGGGACACCTACCAGTCTGAACCGGACGGCT TTTCTCATTTCCACTTGTACGTGTGCGCTGCTTTTCTCGTGAGATGGAGGAAATACTAGAAGAAAAAGATT TTCAAGAGCTGCTGCTCCTCCAGAACCTGCCCACAGCCCACTGGGATGATGAGGACATCAGCCTGTTGCTGG CCGAGGCCTACCGCCTCAAGTTTGCCTTTTGCCGACGCCCCCAATCACTACAAGAAATGAGCCCAGGCCCACCCGC TGCTAAAAGGCCTTGTGAGGTGGCCCCACCCTCCAGGGGAGCTGGTGAAGATGGGCCACAGACCTGGTCTAGGGC TGACAAAGACAGGGACAGCCTTTGTTTTCTGAGATACCAAAGAGAGCCAGGGGAGGGCCCCGGGTTCGGCGGCCA GAGGCAGGTCAGGGGTCCCCTCTCCCTCCCTGCAATGTCCTTGCCAAATGACTGCCTCGTGCTGCCCCTAGTC $\tt CGGGGCAGCCTAGGAGGCCGACCCTCTTTGGAGTCCTGCTGTCTGGGTGCCAGGGCCGGAACGAGGTAGTGGCCAGGGCCAGGGCCGGAACGAGGTAGTGGCCAGGGCCAGGGCCGGAACGAGGTAGTGGCCAGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGCCAGGGCCAGGGCCAGGCCAGGGCCAGGCCAGGCCAGGGCCAGGCAGAGCAGAGCAGAGCAGAGCAGAGCAGAGCAGAGCAGAGCAGAGCAGAGCAGAGCAGAGCAGAGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGAGAGCAAGA$ TCTCATACCTACTCTGAAATGCAAAACTTCTATTCTGTTGAGTGAAAGAATAAAATGTAGACAAAATCTAGACCG AGACGTTGCGCTGACCCGGGGTCTCTGTGCCGCGAGGTCCCCTCACAGCTGTATTTCACTGCTGCTGGCCCTTTC TGAACCTCTTTTACAAGAGAGAAACCCCCACCTCCCTGAGGTCCAGGGCCAAGTGGCCCCGCCACGCAGGTAGGC GCCGGCCTCAGCCAGAGCCCCTGGAGGCCCACCCAGGCTGTCGGGCCATGTTGGGCTGGCAGACGGGCAGGGGGT CGCGTCCCTGTCATCAAAGCCCTGAACCACAGTGCTCTTCTCACCGCAGCCTGGAAGCGGAATGAGCTTTTGGAG ACTTCCTGGGACTTGCTGTCCTGTCCAGGTCTGCCAGGTGTAGGGGAGGTGTGACTGGTTCCATCATGGACCGG TTCCTCCATGGACCGGTTCCTCCGTGGACCGGTTCCGCCATGGACCGGTTCCGCCATGGACCACTCCTGCCCTGG ${\tt ACCACTCCTGCCCTGGACCGGTTCTGCCGTGGACTGGTTCCCGCCGTGGACCAGTTCCCGCTGTATACTGGTTCT}$ GCCCTGGACTGGTTCCCGCTGTGGACTGGTTCCTTGGGGCTCTAAGTGCGGAAGGGCCCAGAGCTGGTCCCTGCC ACGTCCTCAGCGACCCACTGGTGACTGACTTCCCAGACTCTCCTCTGTCCCTCAGGAGCAGCCGTGTCCTCTCCC AGGCCCTAGGACACTGCCAGAGACTGTGGGACATACAGGCATAAGTGATGTGTGTTTTCTGCTTCTGTTTTAAA AATCCAGGGTCATTACACACAGCATGGAAATTAGCACAAAATGCTGTGCAAACGTCAGATGCTCCCAAACCAGCA AAGGGATGGGCTTGCTTCACATCAGATGCGGGCACGCCTTACCCCTGCCTTCCGTGTCCCCACCCCAGGGTCAAG GGTTCCTCAGACCAGCCATGCCTCCTCCTCCTGCCGCCTCCTTTTCTAGATGGGGAGGGGATTCCGTCACAAGAA GAGCCGCCCTCGGCCGTGTGCAGGAAGCCCCATGTCGCTTTGCCGAGATCAGCCCTGGGAGGATCCCCTTCTCC AGCTCAGATCATGCCGTGTGGCCAGAAGGCTGCGGACACAACTGACCTGCTTCTCGAGGTGGTTGATGTTTTAAA

6614/6881 FIGURE 6106B

 $\tt TTGGCCGCGGGCCTTAAGTCTGAGCAGATCCATCTGGAATGTTCGGGGTGTGCTGTCTGGATGTGGTGCGCTAAA$ AACACGGAATAAAGATCAGTGAC

MASDGARKQFWKRSNSKLPGSIQHVYGAQHPPFDPLLHGTLLRSTAKMPTTPVKAKRVSTFQEFESNTSDAWDAG EDDDELLAMAAESLNSEVVMETANRVLRNHSQRQGRPTLQEGPGLQQKPRPEAEPPSPPSGDLRLVKSVSESHTS CPAESASDAAPLQRSQSLPHSATVTLGGTSDPSTLSSSALSEREASRLDKFKQLLAGPNTDLEELRRLSWSGIPK PVRPMTWKLLSGYLPANVDRRPATLQRKQKEYFAFIEHYYDSRNDEVHQDTYRQIHIDIPRMSPEALILQPKVTE IFERILFIWAIRHPASGYVQGINDLVTPFFVVFICEYIEAEEVDTVDVSGVPAEVLCNIEADTYWCMSKLLDGIQ DNYTFAQPGIQMKVKMLEELVSRIDEQVHRHLDQHEVRYLQFAFRWMNNLLMREVPLRCTIRLWDTYQSEPDGFS HFHLYVCAAFLVRWRKEILEEKDFQELLLFLQNLPTAHWDDEDISLLLAEAYRLKFAFADAPNHYKK

PCT/US2003/028547

6616/6881 FIGURE 6108A

GTCCGGCGCGTCGCGGGCGGGCGGGGCCGCGGGGGGGGCGCGGGGGCAGACAAAGCCGCGGTAATGAA AAGGGTCACGTGTATGCTCTCAAGATGATCAGGCAGATCCTGTCCTCAGGACCAGAAGCACGTCTCTGCTGCACA CATTGTTGTCTACACCATGAGTGTTTAGTAGCAGGACTCTTGGAAAGCAGTGATCTATGCTGTAAGACCATGAGT CACAGATTCTTTTTTCAGTACTATTTATGATTAGCCATATTTCTAGAAACATCCTGAAAGATGGAATTATGACG **AAAAAGTGAAGATAATCTACATTCGGGGGCACAAATGAGCACTTGGATCAGTGTTTTATGAACCTAAGATACAGC** CGGAGTAGTTATGGTCAGTCATGGAGAATAACTTGAAAAACTTGTCCCAAAGAGGACGGTGATTTCGTTTCTGATA AAATAAAGTTTAAAATAGAAGAGGAAGATGATGATGGAATTCCTCCTGATAGTTTTGGAAAGAATGGACTTTAAAA AGCCCCGGGGAAGTACTTGTCTGCAGAGAGTGAGGATGACTATGGCGCGCTGTTCTCCCAGTACAGCAGCACCC TATACGACGTGGCCATGGAGGCCGTGACCCAGAGCCTCCTTTCCAGCCGGAACATGAGCTCCAGGAAGAAGTCTC CAGCCTGGAAGCATTTTTTTATCTCTCCCCGAGACAGCACTAAAGCAATATGCATGTACTGTGTAAGGAGTTCA GCAGAGGCAAAAACGAGAAAGACTTGAGTACCAGTTGTCTCATGAGGCACGTGAGGCGCGCACACCCGACCGTGC ·TCATTCAGGAAAATGGCAGTGTGTCTGCCGTGTCCTCGTTCCCCTCTCCCTCACTCCTGCTTCCACCACAGCCTG CGGACGCGGTGACCTCAGCACCATCCTCTCACCCATCAAACTTGTCCAGAAAGTGGCGTCTAAGATCCCGTCCC CCGATCGAATAACAGAGGAGTCTGTGTCTGTAGTTTCTTCTGAAGAAATCTCCTCTGACATGTCCGTTTCGGAGA AGTGCGGCAGAGAAGAAGCCCTGGTGGGGTCGTCTCCCCACCTCCCTGCTCTCCATTACGATGAACCTGCAGAGA ACTTAGCGGAGAAGAGCCTTCCACTTCCAAAGAGCACCTCTGGGTCCAGGAGAAGGTCCGCTGTCTGGAAGCACT TCTACCTGTCGCCACTGGACAACTCCAAAGCTGTCTGCATTCACTGCATGAACGAGTTCAGCCGGGGGAAGAATG GGAAGGACCTGGGCACGAGCTGCCTCATCAGGCACATGTGGAGGGCACACCGCGCCATCGTGTTGCAGGAGAACG TCAGCTCTGTGTCCTCCAGTAAAGCCGGTCAGAGAGTCCCCTTCGGCCTCCTCCTCCCCTGACAGGCTGA CTGAGGACTTGCAGTCTCACTTGAACCCTGGAGATGGGCTGATGGAAGACGTGGCGGCCTTCTCATCTTCCGATG ACATAGGGGAGGCCTCGGCGTCCTCTCTGAGAAGCAGCAGGCTGATGGGCTGAGTCCTAGATTGTTTGAATCTG GCGCCATCTTCCAGCAGAATAAAAAGGTCATGAAAAGACTGAAGTCGGAGGTCTGGCATCACTTCTCCCTGGCCC CCATGGACAGCCTCAAGGCCGAGTGTCGGTACTGCGGCTGTGCCATCAGCCGGGGGAAGAAGGGTGATGTGGGCA CCAGCTGCCTGATGAGACATCTCTACCGGCGCCATCCAGAAGTTGTCGGGAGCCAGAAGGGCTTCCTGGGTGCAA TGGTCACAAAAAACAATCAAGTTATGTTTCCTGTTAATAGCAAAAAGACCTCGAAGCTGTGGAATCATTTTTCTA TTTGCTCCGCAGACTCCACAAAAGTCGTGTGCTTGCACTGTGGCCGGACCATCAGCCGGGGGAAGAAGCCGACTA ACTTGGGTACCAGCTGTCTTCTGAGACATTTACAGCGGTTCCATAGCAACGTGCTGAAAACTGAGGTCTCGGAGA CGGCTCGGCCCTCTCTCCGGACACCCGGGTGCCGCGGGGCACAGAATTATCAGGCGCTTCCTCTTTTGATGACA CCAATGAGAAGTTTTACGATTCTCACCCAGTTGCCAAAAAAATCACAAGTCTCATAGCTGAAATGATTGCACTTG ACCTCCAGCCATATTCTTTTGTAGACAACGTTGGCTTTAACAGGCTGCTTGAATACTTGAAACCTCAGTACTCCC ACCTTAAGGAAGCTGAGAGTGGTGATCCACTTCACGTCTGGAATATGGATGAGTAACCAGACCCGTGAGTACC TGACCCTCACGGCCCACTGGGTTTCCTTCGAGTCGCCAGCCCGGCCGCGCTGTGACGACCACCACTGCTCGGCGC TGTTGGACGTGTCGCAGGTGGACTGCGACTACAGTGGCAACAGCATTCAGAAGCAGCTGGAGGTGCTGGTGGGAAG CGTGGGTGACCTCCACCGGCCTTCAGGTGGGCATCACCGTCACCGACAACGCCAGCATCGGGAAGACGCTGAACG AGGGGGAGCACTCGAGCGTGCAGTGCTTCAGCCATACGGTGAACCTGATCGTCAGCGAGGCCATTAAGAGCCAGC GGATGGTGCAGAACCTGCTGAGCCTCGCCCGGAAGATCTGCGAGCGGTGCACCGGTCGCCCAAGGCGAAGGAGA AACTGGCCGAGCTGCAGAGGGAGTACGCGCTGCCTCAGCATCACCTCATCCAGGACGTCCCGTCCAAGTGGAGCA CTTCCTTCCACATGCTCGAGCGGCTCATTGAGCAGAAAAGGGCCATTAACGAGATGTCCGTCGAGTGTAACTTCC GAGAGCTGATCAGCTGCGACCAGTGGGAGGTCATGCAGTCCGTGCGCTGAAAGCCCTTCGAGGCTGCGA GCCGGGAGATGACCACGCAGATGTCCACCCTCAGCCAGGTCATCCCCATGGTACACATCCTCAACAGGAAGGTGG AGATGCTCTTCGAGGAGACGATGGGCATCGACACCATGCTGCGCTCTCTGAAGGAGGCCCATGGTGAGCCGCCTGT CTGCCACCTCCACGACCCGCGGTACGTCTTCGCCACGCTGCTGGATCCTCGCTACAAGGCCTCCCTGTTTACGG AGGAGGAGCCGGAGCAGTACAAACAGGATTTAATCAGGGAACTCGAACTCATGAATTCTACCTCAGAGGACGTGG

6617/6881 FIGURE 6108B

CTGCCTCCCACAGGTGTGATGCTGGCTCCCCGTCGAAAGACTCTGCCGCAGAGGAGAACCTGTGGTCACTTGTGG CCAAGGTGAAGAAGAAGACCCAAGAGAAAAGCTGCCTGAAGCCATGGTGCTTGCGTATCTGGAGGAGGAGGTGC TTGAACACAGCTGTGACCCGCTCACCTACTGGAACCTGAAGAAGGCGTCCTGGCCGGGGCTGTCCGCGCTGGCCG TCAGATTTTTGGGCTGCCCCCAAGCATCGTCCCTTCAGAAAAGCTGTTCAACACACCCACTGAGAACGGTAGCC TTGGCCAATCCAGGCTCATGATGGAACATTTTGAAAAACTTATCTTTTTGAAAGTGAATCTTCCCTTAATATACT TTCAGTATTGAAACTCACGACGGCACCACTAGGCCAGAGGCGTGGCTGCCCCAGCGTTAGCAGCCTGTACCAGGT CTATGACCCGCTCTGCCCACGGCTGTGTACGACATCAGACCAGGCACTCTCAGGGCCGCTCTCCAGCTCACCACA GTGTCTCCACGTGCCTTACCCCTTCTCCTTCAGGCCAAGTTTCGCGGGGTGTTTTATTAAGACGTCCACTAGAAA TAGCTTGTCCTGTCAACTATGAAATATGGTGACTAGATTTTAATTCATAACCGTAAAGTTTTTTAAAGTTTTTGGG TTAGTAATTTGTTTTACTAGAATGACAAAGAAGATGTAAACCATTTTATTCTGTAGGCTTTTTACTCAATTATGT ACAAACCACAAATCAGGTACTGTATTTTAGTGAAGCATTGCTTTAATTGCAACAGAATAGCTTTTGTGGCTATCA CCCGCGGAGTACAGATAATATTCTGGAAGGTAACTGTTTACTACGACAGAGACGTGGCATTTGGAAACGAAACTT AGATGTTTCATGGAGCTTATTTTGAGAACTTTCCCATTTCAGGTTTCTGCATTCAGGCTTTACATGGTCAGTTAA CTCAGAGATACCCCAGCTGTTTATCATCAGCTCCTCTGAAATGTGATCCCTTTGTAACTGTGCTCATCACTTCGC CAGTGCGTTCAATGACACGCTGATGGCAGGTGGTCCCTGCTGAAACCCCCACGCCTCCGCTTCAGCATCTCCACG CTCTGAAGCTGTCTTTCAAAATGTGTGCACTGACCCCCTTGTTTGATCAAATTTGTGTAAAATTTTTTTAGAAGA GATGGCTTATTAACAGGGAAGAAGCTTGTTATATTCCAGTTGTAAGAATAGCCTTAGTGTTTAGATTTTTTATG ATAGGGAAGATGCGGCCATCACTGGGATATTTTCAAATCCCAAGGACATCAGAGTGAAGTGTCAGTTGTCAGATG TGCATTGACTATGTTTTAGTGTATTTATAAATGGTGAACTCAGTTTCTGAAATTAAACTTCTTATTTGCAATTTT

PCT/US2003/028547

6618/6881 FIGURE 6109

GATGACAGGCGTGCGCCACTGCACCCGGCCCGTGAAGGTCTTTTCTGAAGGGAGCTACCTTTGAGAAGTGCCTGT TGGGACAGAACTCCCTGCTCTGGTCTGACCCTCTGCACGCTAGGGTGGTCCTGCACCTGTCGGGGAGGGGGCCAA GGACACAGCACTGGGCTGGGGCAGGGCTCTGCGCTGGTGCTGCCATCCCAGTTCTGCCATTCCCCAGCGC ATGCTGCTGAAGGTGTCTGCACACATCACCGAGCAGCTGGGCATGGCCCCAGGTGGCGAGTTCAGGGAGGCC ${\tt TTCAAGGAGGTGGGCACAGGGTGAGGTAGGGGGTGGCCACAGGG} {\tt ATG} {\tt TGGCTCACAGGGGTGGTCCGGGGTTCCC}$ CTGCGGGGCTGCAGCCATCCCTCTCCACAGCAAGGATGACGTGGAACGCTGCAAGCAGAAGGACCTACTGGAGCA $\tt CTACATGCTGCGCCAGGCCGCGCGCGCCTCGAGCTGCCTCGGGCCTCTGACGGTGACGGCCGCCGCAGGCGTG$ GGACCCCTGTGAGGCTGAGGCCCGAGCAGGTACTGACCCCTTGTCCTTCCCCACAGCCGAGCCCAGGAAGTGCG ACATCCAGGAGATCATGACCGTGCCCCGCCGTCCGTCTCCGGCAGAGTGTCTCGGTTGGCCGTGAAGGCCGCCT TCTTCGGCCTGCTGGGCTACAGCCTGTACTGGATGGGCCGCCGCACCCGCAGCCTGGTCCTGCCCGCCGCCG GGAGCCAGTGCCCCGCGGCACTTCTGGGTGCCAGGTGCATCCTAGCCCGCCGAGGCCCCTGCCACCCCCATG GGGGTCTGGGCCCGGCCTCGCCTCCTGGGCCAGTCACCCCTCCCCAGCCCAAATAAAGGATTATT TAACTGTCTGAAAAAAAAAAAAAAAAAAAAAA

 ${\tt MWLTGVVRGSQCSPTPSLCSRPARCLSASSTWVTDPSPSPSRGPSQRSPSGRRSGWLGACASCQTPSGRAAPGTLAGLQGGLWEAPGPPVQVQAQPILTQGLPCPFLPPQIPNKRAVVPARCPQCQPHPPSPLPIPAGLQPSLSTARMTWNAASRRTYWSR$

GCTGGGCGACGGCGCCC<u>ATC</u>TACCTGGGCGAGGTGTGCACGGCGACCGGCGAGCGCTGGGAGCTGCAGCTCAA GGGCGCCGGGCCCACGCCCTTCTCCAGACAGGCCGACGGTCGCAAGGTCCTACGGTCAAGCATCCGGGAGTTTCT ATGCAGCGAAGCCATGTTCCACCTGGGAGTCCCCACCACACGGGCCGGCGCCTGCGTCACGTCCGAGTCCACGGT GGTGCGCGACGTGTTCTATGATGGTAATCCCAAATATGAACAATGCACGGTTGTGTTGCGTGTAGCTTCCACTTT CATAAGGTTTGGATCCTTTGAGATTTTTAAGTCTGCAGATGAGCACACAGGGCGTGCAGGCCCCAGCGTGGGGAG GAACGACATTCGAGTGCAGCTGCTCGACTATGTCATCAGCTCCTTTTACCCCGAGATCCAGGCTGCTCATGCCAG CGACAGCGTGCAGAGAAATGCTGCCTTCTTCCGGGAGGTGACGCGGCGCACGGCGCGCATGGTGGCCGAGTGGCA GTGTGTGGGCTTCTGCCACGGCGTGCTCAACACCGACAACATGAGCATCCTGGGGCTCACCATCGACTACGGGCC CTTTGGCTTCCTGGACAGGTACGACCCCGACCACGTGTGCAATGCCTCCGACAACACCGGCCGCTACGCGTACAG CAAGCAGCCCGAGGTGTGCAGGTGGAACCTGCGGAAGCTGGCCGAGGCCCTGCAGCCGGAACTGCCCCTGGAGCT GGGGGAGGCCATCCTGGCCGAGGAGTTTGACGCCGAGTTCCAAAGGCACTACCTGCAGAAGATGCGCAGGAAGCT GGGCCTCGTGCAGGTGGAGCTGGAGGAAGACGGGGCGCTGGTGTCCAAGCTCCTGGAGACCATGCATCTGACCGG TGCCGACTTCACAAACACCTTCTACTTGCTGAGCTCCTTCCCAGTGGAGCTAGAGTCGCCAGGCCTGGCGGAATT CCTGGCCAGGCTGATGGAGCAGTGTGCCTCCCTGGAGGAGCTGAGGCTGGCCTTCCGGCCCCAGATGGATCCCCG GCAGAATGCCATCGAGGCTGCCGAGCGCGGGGACTTCTCAGAGGTGCGGCGGGTGCTGAAACTACTGGAGACCCC ACACCCCTGGAGTCTCCCGAGGCCCCCATGTGCTGCTGAGTGGCCAAGATGATGCCAGGCTGCCCTATACACTGG GGGATTCTGCCCTGGCCCATGCACACCCGTCTTTCCATGATGGCAGAGACATCCAGTCAGGACCTGACCCGTCTC CTCG

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PSMAQP

6627/6881 FIGURE 6118 ...

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ACCGCCTTTGACCTGTCAGTGTTCCCACTTATGTGTGACCTTGGTGGTGGGGCTGGAGCTCTGGCTAAGGAATGC
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6632/6881 FIGURE 6123A

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ATGCCCAAGCGCGCGCACTGGGGGGCCCTCTCCGTGGTGCTGATCCTGCTTTGGGGCCCATCCGCGAGTGGCGCTG GCCTGCCCGCATCCTTGTGCCTGCTACGTCCCCAGCGAGGTCCACTGCACGTTCCGATCCCTGGCTTCCGTGCCC GCTGGCATTGCTAAACACGTGGAAAGAATCAATTTGGGGTTTAATAGCATACAGGCCCTGTCAGAAACCTCATTT GCAGGACTGACCAAGTTGGAGCTACTTATGATTCACGGCAATGAGATCCCAAGCATCCCCGATGGAGCTTTAAGA GACCTCAGCTCTCTCAGGTTTTCAAGTTCAGCTACAACAAGCTGAGAGTGATCACAGGACAGACCCTCCAGGGT CTCTCTAACTTAATGAGGCTGCACATTGACCACAACAAGATCGAGTTTATCCACCCTCAAGCTTTCAACGGCTTA ACGTCTCTGAGGCTACTCCATTTGGAAGGAAATCTCCTCCACCAGCTGCACCCCAGCACCTTCTCCACGTTCACA TTTTTGGATTATTTCAGACTCTCCACCATAAGGCACCTCTACTTAGCAGAGAACATGGTTAGAACTCTTCCTGCC AGCATGCTTCGGAACATGCCGCTTCTGGAGAATCTTTACTTGCAGGGAAATCCGTGGACCTGCGATTGTGAGATG AGATGGTTTTTGGAATGGGATGCAAAATCCAGAGGAATTCTGAAGTGTAAAAAGGACAAAGCTTATGAAGGCGGT CAGTTGTGCCAATGTGCTTCAGTCCAAAGAAGTTGTACAAACATGAGATACACAAGCTGAAGGACATGACTTGT CTGAAGCCTTCAATAGAGTCCCCTCTGAGACAGAACAGGAGCAGGAGTATTGAGGAGGAGCAAGAACAGGAAGAG GATGGTGGCAGCCAGCTCATCCTGGAGAAATTCCAACTGCCCCAGTGGAGCATCTCTTTGAATATGACCGACGAG CACGGGAACATGGTGAACTTGGTCTGTGACATCAAGAAACCAATGGATGTGTACAAGATTCACTTGAACCAAACG GATCCTCCAGATATTGACATAAATGCAACAGTTGCCTTGGACTTTGAGTGTCCAATGACCCGAGAAAACTATGAA AAGCTATGGAAATTGATAGCATACTACAGTGAAGTTCCCGTGAAGCTACACAGAGAGCTCATGCTCAGCAAAGAC $\tt CCCAGAGTCAGCTACCAGTACAGGCAGGATGCTGATGAGGAAGCTCTTTACTACACAGGTGTGAGAGCCCAGATT$ CTTGCAGAACCAGAATGGGTCATGCAGCCATCCATAGATATCCAGCTGAACCGACGTCAGAGTACGGCCAAGAAG TGCAACGTGAAAGCTTCTGAGAGTCCATCTATCTTCTGGGTGCTTCCAGATGGCTCCATCCTGAAAGCGCCCATG GATGACCCAGACAGCAAGTTCTCCATTCTCAGCAGTGGCTGAGGATCAAGTCCATGGAGCCATCTGACTCA GGCTTGTACCAGTGCATTGCTCAAGTGAGGGATGAAATGGACCGCATGGTATATAGGGTACTTGTGCAGTCTCCC TCCACTCAGCCAGCCGAGAAAGACACAGTGACAATTGGCAAGAACCCAGGGGAGTCGGTGACATTGCCTTGCAAT TCACATGTATACATGTTGCCAAATGGAACTCTTTCCATCCCAAAGGTCCAAGTCAGTGACAGTGGTTACTACAGA TGTGTGGCTGTCAACCAGCAAGGGGCAGACCATTTTACGGTGGGAATCACAGTGACCAAGAAAGGGTCTGGCTTG CCATCCAAAAGAGGCAGACGCCCAGGTGCAAAGGCTCTTTCCAGAGTCAGAGAAGACATCGTGGAGGATGAAGGG GGCTCGGGCATGGGAGATGAAGAACACTTCAAGGAGACTTCTGCATCCAAAGGACCAAGAGGTGTTCCTCAAA ACAAAGGATGATGCCATCAATGGAGACAAGAAAGCCAAGAAAGGGAGAAAGCTGAAACTCTGGAAGCATTCG GAAAAAGAACCAGAGACCAATGTTGCAGAAGGTCGCAGAGTGTTTGAATCTAGACGAAGGATAAACATGGCAAAC AAACAGATTAATCCGGAGCGCTGGGCTGATATTTTAGCCAAAGTCCGTGGGAAAAATCTCCCTAAGGGCACAGAA GTACCCCCATTGATTAAAACCACAAGTCCTCCATCCTTGAGTCTAGAAGTCACACCACCTTTTCCTGCTATTTCT CCCCCTCAGCATCTCCTGTGCAGACAGTAACCAGTGCTGAAGAATCCTCAGCAGATGTACCTCTACTTGGTGAA GAAGAGCACGTTTTGGGTACCATTTCCTCAGCCAGCATGGGGCTAGAACACAACCACAATGGAGTTATTCTTGTT GAACCTGAAGTAACAAGCACCTCTGGAGGAAGTTGTTGATGACCTTTCCGAGAAGACTGAGGAGATAACTTCC ACTGAAGGAGACCTGAAGGGGACAGCCCCTACACTTATATCTGAGCCTTATGAACCATCTCCTACTCTGCAC ACATTAGACACAGTCTATGAAAAGCCCACCCATGAAGAGACGGCAACAGAGGGTTGGTCTGCAGCAGATGTTGGA TCGTCACCAGAGCCCACATCCAGTGAGTATGAGCCTCCATTGGATGCTGTCTCCTTGGCTGAGTCTGAGCCCATG CAATACTTTGACCCAGATTTGGAGACTAAGTCACAACCAGATGAGGATAAGATGAAAGAAGACACCTTTGCACAC CTTACTCCAACCCCACCATCTGGGTTAATGACTCCAGTACATCACAGTTATTTGAGGATTCTACTATAGGGĠAA CAAGACACCTTACTGATTAAAAAGGGTATGAAAGAGATGTCTCAGACACTACAGGGAGGAAATATGCTAGAGGGA GACCCCACACTCCAGAAGTTCTGAGAGTGAGGGCCCAAGAGAGCAAATCCATCACTTTGCCTGACTCCACACTG GGTATAATGAGCAGTATGTCTCCAGTTAAGAAGCCTGCGGAAACCACAGTTGGTACCCTCCTAGACAAAGACACC ACAACAGCAACAACAACACCAAGGCAAAAAGTTGCTCCGTCATCCACCATGAGCACTCACCCTTCTCGAAGGAGA CCCAACGGGAGAAGGAGATTACGCCCCAACAAATTCCGCCACCGGCACAAGCAAACCCCACCACAACTTTTGCC CCATCAGAGACTTTTCTACTCAACCAACTCAAGCACCTGACATTAAGATTTCAAGTCAAGTGGAGAGTTCTCTG

6633/6881 FIGURE 6123B

GTTCCTACAGCTTGGGTGGATAACACAGTTAATACCCCCAAACAGTTGGAAATGGAGAAGAATGCAGAACCCACA AGAGCGTCCGGATCCAAGCCCAGCCCTTCTCCAGAAAATAAACATAGAAACATTGTTACTCCCAGTTCAGAAACT ATACTTTTGCCTAGAACTGTTTCTCTGAAAACTGAGGGCCCTTATGATTCCTTAGATTACATGACAACCACCAGA AAAATATATTCATCTTACCCTAAAGTCCAAGAGACACTTCCAGTCACATATAAACCCACATCAGATGGAAAAGAA ATTAAGGATGATGTTGCCACAAATGTTGACAAACATAAAAGTGACATTTTAGTCACTGGTGAATCAATTACTAAT GCCATACCAACTTCTCGCTCCTTGGTCTCCACTATGGGAGAATTTAAGGAAGAATCCTCTCCTGTAGGCTTTCCA GGGGAAAATCTTACAGACCCTCCCTTCTTAAAGAGCTTGAGGATGTGGATTTCACTTCCGAGTTTTTGTCCTCT TTGACAGTCTCCACACCATTTCACCAGGAAGAAGCTGGTTCTTCCACAACTCTCTCAAGCATAAAAGTGGAGGTG GCTTCAAGTCAGGCAGAAACCACCACCCTTGATCAAGATCATCTTGAAACCACTGTGGCTATTCTCCTTTCTGAA ACTAGACCACAGAATCACCCCTACTGCTGCCCGGATGAAGGAGCCAGCATCCTCGTCCCCATCCACAATTCTC ATGTCTTTGGGACAAACCACCACCACTAAGCCAGCACTTCCCAGTCCAAGAATATCTCAAGCATCTAGAGATTCC AAGGAAAATGTTTTCTTGAATTATGTGGGGAATCCAGAAACAGAAGCAACCCCAGTGAACAATGAAGGAACACAG CATATGTCAGGGCCAAATGAATTATCAACACCCTCTTCCGACCAGGATGCATTTAACTTGTCTACAAAGCTGGAA TTGGAAAAGCAAGTATTTGGTAGTAGGAGTCTACCACGTGGCCCAGATAGCCAACGCCAGGATGGAAGAGTTCAT GCTTCTCATCAACTAACCAGAGTCCCTGCCAAACCCATCCTACCAACAGCAACAGTGAGGCTGCCTGAAATGTCC ACACAAAGCGCTTCCAGATACTTTGTAACTTCCCAGTCACCTCGTCACTGGACCAACAAACCGGAAATAACTACA TATCCTTCTGGGGCTTTGCCAGAGAACAACAGTTTACAACTCCAAGATTATCAAGTACAACAATTCCTCTCCCA TTGCACATGTCCAAACCCAGCATTCCTAGTAAGTTTACTGACCGAAGAACTGACCAATTCAATGGCTACTCCAAA GTGTTTGGAAATAACAACATCCCTGAGGCAAGAAACCCAGTTGGAAAGCCTCCCAGTCCAAGAATTCCTCATTAT ATACCCACTTCTCCTGCCCCAGTAATGAGAGAGAAAAGTTATTCCAGGTTCCTACAACAGGATACATTCCCAT AGCACCTTCCATCTGGACTTTGGCCCTCCGGCACCTCCGTTGTTGCACACTCCGCAGACCACGGGATCACCCTCA ACTAACTTACAGAATATCCCTATGGTCTCTTCCACCCAGAGTTCTATCTCCTTTATAACATCTTCTGTCCAGTCC TCAGGAAGCTTCCACCAGAGCAGCTCAAAGTTCTTTGCAGGAGGACCTCCTGCATCCAAATTCTGGTCTCTTGGG GAGGCAACAGGAAAACCAAAGCCTTTCGTTACTTGGACAAAGGTTTCCACAGGAGCTCTTATGACTCCGAATACC AGGATACAACGGTTTGAGGTTCTCAAGAACGGTACCTTAGTGATACGGAAGGTTCAAGTACAAGATCGAGGCCAG TATATGTGCACCGCCAGCAACCTGCACGGCCTGGACAGGATGGTGGTCTTGCTTTCGGTCACCGTGCAGCAACCT CAAATCCTAGCCTCCCACTACCAGGACGTCACTGTCTACCTGGGAGACACCATTGCAATGGAGTGTCTGGCCAAA GGGACCCCAGCCCCCAAATTTCCTGGATCTTCCCTGACAGGAGGGTGTGGCAAACTGTGTCCCCCGTGGAGGGC GTGGCCAGCAATGCAGCCGGGGGGACAGCCTGGCCATCCGCCTGCACGTGGCGGCACTGCCCCCGTTATCCAC CAGGAGAAGCTGGAGAACATCTCGCTGCCCCCGGGGCTCAGCATTCACATTCACTGCACTGCCAAGGCTGCGCCC $\tt CTGCCCAGCGTGCGCTGGGTGCTCGGGGACGGTACCCAGATCCGCCCCTCGCAGTTCCTCCACGGGAACTTGTTT$ GTTTTCCCCAACGGGACGCTCTACATCCGCAACCTCGCGCCCAAGGACAGCGGGCGCTATGAGTGCGTGGCCGCC ACCTCCCGCGGAGGACGGCGCGGGGACGCCCCGGGGACCCCTGG ${\tt CCGCGCATCCTCTGGAGGCTGCCGTCCAAGAGGATGATCGACGCGCTCTTCAGTTTTGATAGCAGAATCAAGGTG}$ TTTGCCAATGGGACCCTGGTGGTGAAATCAGTGACGGACAAAGATGCCGGAGATTACCTGTGCGTAGCTCGAAAT AAGGTTGGTGATGACTACGTGGTGCTCAAAGTGGATGTGGTGATGAAACCGGCCAAGATTGAACACAAGGAGGAG AACGACCACAAAGTCTTCTACGGGGGTGACCTGAAAGTGGACTGTGTGGCCACCGGGCTTCCCAATCCCGAGATC TCCTGGAGCCTCCCAGACGGGAGTCTGGTGAACTCCTTCATGCAGTCGGATGACAGCGGTGGACGCACCAAGCGC AAGACTTACTTGGCGGTTCAGGTGCCCTATGGAGACGTGGTCACTGTAGCCTGTGAGGCCAAAGGAGAACCCATG CCCAAGGTGACTTGGTTGTCCCCAACCAACAAGGTGATCCCCACCTCCTGAGAAGTATCAGATATACCAAGAT

6634/6881 FIGURE 6123C

GGCACTCTCCTTATTCAGAAAGCCCAGCGTTCTGACAGCGGCAACTACACCTGCTTGGTCAGGAACAGCGCGGGA GAGGATAGGAAGACGGTGTGGATTCACGTCAACGTCCAGCCACCCAAGATCAACGGTAACCCCAACCCCATCACC ACTGTGCGGGAGATAGCAGCCGGGGGCAGTCGGAAACTGATTGACTGCAAAGCTGAAGGCATCCCCACCCCGAGG GTGTTATGGGCTTTTCCCGAGGGTGTGGTTCTGCCAGCTCCATACTATGGAAACCGGATCACTGTCCATGGCAAC GAGGCCAGGTTGATCCTGCAGCTCACTGTCCTGGAGCCCATGGAGAAACCCATCTTCCACGACCCGATCAGCGAG AAGATCACGGCCATGGCGGGCCACACCATCAGCCTCAACTGCTCTGCCGCGGGGACCCCGACACCCAGCCTGGTG TGGGTCCTTCCCAATGGCACCGATCTGCAGAGTGGACAGCAGCTGCAGCGCTTCTACCACAAGGCTGACGGCATG CTACACATTAGCGGTCTCTCCTCGGTGGACGCCGGGGCCTACCGCTGCGTGGCCCGCAATGCCGCTGGCCACACG GAGAGGCTGGTCTCCCTGAAGGTGGGACTGAAGCCAGAAGCAAACAAGCAGTATCATAACCTGGTCAGCATCATC AATGGTGAGACCCTGAAGCTCCCCTGCACCCCTCCCGGGGCTGGGCAGGGACGTTTCTCCTGGACGCTCCCCAAT GGCATGCATCTGGAGGGCCCCCAAACCCTGGGACGCGTTTCTCTTCTGGACAATGGCACCCTCACGGTTCGTGAG GCCTCGGTGTTTGACAGGGGTACCTATGTATGCAGGATGGAGACGGAGTACGGCCCTTCGGTCACCAGCATCCCC GTGATTGTGATCGCCTATCCTCCCGGGATCACCAGCGAGCCCACCCCGGTCATCTACACCCGGCCCGGGAACACC GTGAAACTGAACTGCATGGCTATGGGGATTCCCAAAGCTGACATCACGTGGGAGTTACCGGATAAGTCGCATCTG AAGGCAGGGGTTCAGGCTCGTCTGTATGGAAACAGATTTCTTCACCCCCAGGGATCACTGACCATCCAGCATGCC ACACAGAGAGATGCCGGCTTCTACAAGTGCATGGCAAAAACATTCTCGGCAGTGACTCCAAAACAACTTACATC CACGTCTTCTGAAATGTGGATTCCAGAATGATTGCTTAGGAACTGACAACAAAGCGGGGTTTGTAAGGGAAGCCA GGTTGGGGAATAGGAGCTCTTAAATAATGTGTCACAGTGCATGGTGGCCTCTGGTGGGTTTCAAGTTGAGGTTGA TCTTGATCTACAATTGTTGGGAAAAGGAAGCAATGCAGACACGAGAAGGAGGGCTCAGCCTTGCTGAGACACTTT CTTTTGTGTTTACATCATGCCAGGGGCTTCATTCAGGGTGTCTGTGCTCTGACTGCAATTTTTCTTTTTTTGCAA ATGCCACTCGACTGCCTTCATAAGCGTCCATAGGATATCTGAGGAACATTCATCAAAAATAAGCCATAGACATGA ACAACACCTCACTACCCCATTGAAGACGCATCACCTAGTTAACCTGCTGCAGTTTTTACATGATAGACTTTGTTC CAGATTGACAAGTCATCTTTCAGTTATTTCCTCTGTCACTTCAAAACTCCAGCTTGCCCAATAAGGATTTAGAAC GACTAGAAGGAGAAATACTTTCTGTCTTATTAAAATTAATAAATTATTGGTCTTTACAAGACTTGGATACATTAC AGCAGACATGGAAATATAATTTTAAAAAATTTCTCTCCAACCTCCTTCAAATTCAGTCACCACTGTTATATTACC TTCTCCAGGAACCCTCCAGTGGGGAAGGCTGCGATATTAGATTTCCTTGTATGCAAAGTTTTTGTTGAAAGCTGT GCTCAGAGGAGGTGAGAGGAGGAAGGAAAAACTGCATCATAACTTTACAGAATTGAATCTAGAGTCTTCCCC GAAAAGCCCAGAAACTTCTCTGCAGTATCTGGCTTGTCCATCTGGTCTAAGGTGGCTGCTTCTTCCCCAGCCATG AGTCAGTTTGTGCCCATGAATAATACACGACCTGTTATTTCCATGACTGCTTTACTGTATTTTTAAGGTCAATAT ACTGTACATTTGATAATAAAATAATATTCTCCC

GGCACGAGGGGAGGCCGGGCGGGGGGGGGCGCAGCCGGCGCTGAGCTTGCAGGGCCGCTCCCCTCACCCGCCCCC TTCGAGTCCCCGGGCTTCGCCCCACCCGGCCCGTGGGGGAGTATCTGTCCTGCCGCCTTCGCCCACGCCCTGCAC ${\tt TCCGGGACCGTCCCTGCGCGCTCTGGGCGCACC} \underline{{\tt ATC}} {\tt CCCGCGGGGCTGCGCTGCTGCTCTTCGGCCTG}$ CTGGGTGTTCTGGTCGCCCCCCGGATGGTGGTTTCGATTTATCCGATGCCCTTCCTGACAATGAAAACAAGAAA CCCACTGCAATCCCCAAGAAACCCAGTGCTGGGGATGACTTTGACTTAGGAGATGCTGTTGTTGATGGAGAAAAT GACGACCCACGACCACCCGAACCCCAAACCGATGCCAAATCCAAACCCCAACCACCCTAGTTCCTCCGGTAGC TTTTCAGATGCTGACCTTGCGGATGGCGTTTCAGGTGGAGAAAAGGAAAAGGAGGCAGTGATGGTGGAGGCAGCCAC AGGAAAGAAGGGGAAGAGGCCGACGCCCCAGGCGTGATCCCCGGGATTGTGGGGGGCTGTCGTGGTCGCCGTGGCT GGAGCCATCTCTAGCTTCATTGCTTACCAGAAAAAGAAGCTATGCTTCAAAGAAAATGCAGAACAAGGGGAGGTG ${\tt GACATGGAGAGCCACCGGAATGCCAACGCAGAGCCAGCTGTTCAGCGTACTCTTTAGAGAAA} \underline{{\tt TAG}}{\tt AAGATTGTC}$ GCGGATGATGTTTACTAACGATGAATTTTACATCCAAAGGGGGATAGGCACTTGGACCCCCATTCTCCAAGGCCC GGGGGGGCGGTTTCCCATGGGATGTGAAAGGCTGGCCATTATTAAGTCCCTGTAACTCAAATGTCAACCCCACCG AGGCACCCCCCGTCCCCAGAATCTTGGCTGTTTACAAATCACGTGTCCATCGAGCACGTCTGAAACCCCTGGT

MARGAALALLLFGLLGVLVAAPDGGFDLSDALPDNENKKPTAIPKKPSAGDDFDLGDAVVDGENDDPRPPNPPKP MPNPNHPSSSGSFSDADLADGVSGGEGKGGSDGGGSHRKEGEEADAPGVIPGIVGAVVVAVAGAISSFIAYQK KKLCFKENAEQGEVDMESHRNANAEPAVQRTLLEK

MGLSPSAPAVAVQASNASASPPSGCPMHEGKMKGCPVNTEPSGPTCEKKTYSVPAHQERAYEYVECPIRGTAAEN KENLDPSNLMPPPNQTPAPDQPFALSTVREESSIPRADSEKKWVYPSEQMFWNAMLKKGWKWKDEDISQKDMYNI IRIHNQNNEQAWKEILKWEALHAAECPCGPSLIRFGGKAKEYSPRARIRSWMGYELPFDRHDWIINRCGTEVRYV IDYYDGGEVNKDYQFTILDVRPALDSLSAVWDRMKVAWWRWTS

 ${\tt MFQIRLSSLRKMTNPFQAWFKLKLKLCLRFSSREVLIVSWLFLVYWLRNCALEGRGVLRMGQLMEGEWKTLVAQE}\\ {\tt NMSTSVHHCNSGLIIIFSASVSTNETMPLNHILCCLQYFPPLRHL}$

CGGACATCTCCCTGGGAGTCGCGCAGAGTGGAGTCAAAGGCAACCAGTGCTCGCTGCGGTCTCTGGGGATCGGGA GGTGGGCAGCCCAATGGAGATGCTCCACCCGAGCAGCCGTCCGAGACGGTGGCTGAGTCTGCGGAGGAGGAGCTG GATGGCATCATTGACAAGACAATTATAGGAGATTTTCAGAAGGAACAGAAAAAATTTGTTGAAGAGCAACATACA AAGAAGTCAGAAGCAGCTGTGCCCCCATGGGTTGACACTAACGATGAAGAAACAATTCAACAACAAATTTTGGCC TTATCAGCTGACAAGAGGAATTTCCTTCGTGACCCTCCGGCTGGCGTGCAATTTAATTTCGACTTTGATCAGATG TACCCCGTGGCCCTGGTCATGCTCCAGGAGGATGAGCTGCTAAGCAAGATGAGATTTGCCCTCGTTCCTAAACTT GTGAAGGAAGAGTGTTCTGGAGGAACTACTTTTACCGCGTCTCCCTGATTAAGCAGTCAGCCCAGCTCACGGCC CTGGCTGCCCAACAGCAGGCCGCAGGGAAGGAGGAGAAGAGCAATGGCAGAGAGATTTGCCGCTGGCAGAG GCAGTACGGCCCAAAACGCCACCCGTTGTAATCAAATCTCAGCTTAAAACTCAAGAGGATGAGGAAGAAATTTCT ACTAGCCCAGGTGTTTCTGAGTTTGTCAGTGATGCCTTCGATGCCTGTAACCTAAATCAGGAAGATCTAAGGAAA GAAATGGAGCAACTAGTGCTTGACAAAAAGCAAGAGGAGACAGCCGTACTGGAAGAGGATTCTGCAGATTGGGAA AAAGAACTGCAGCAGGAACTTCAAGAATATGAAGTGGTGACAGAATCTGAAAAACGAGATGAAAACTGGGATAAG GAAATAGAGAAAATGCTTCAAGAGGAAAATTAGCTGTTCCTGAAATAGAAGAATAATCCTTAACAGTCTGCAAAC TGACATTAAATTCTAGATGTTGACAATTACTGAATCAGAAGGCATGAAAGAGTATAATTTTATGAAATTCAAAAT TATTCTTTTTTCAAGTTGAAACTTGCCTCTTCTACTTTAAAAAAGTATATAGAACAGTTACTTCTAATAATCAGA AAGAGATGTTTTATAGAACATTTCTTTAATATAAAGTTAGAGATGTCTTCATAGGCAGTATGGCTATCTTTGCCA CAGAAACATAAGTAAAATTTTAGAGTTCTGTTTTCCATGAGGTCAAAAATATAATTTATTCCTCAGTCATGGTTT TCTAAATATCTGTACTCCACATTCCATTTTAATTGATATGAGGGTGTTAAAGTACCTACTTAATGGGTTGATTAC TATCAAAATGACCAAATTATACCAAAGAACTTAAGAGGAAGCACTTTCAGAACTATTCACTTGCCAGGTATTTTC TAAAATTCCACCTGAAAGCCAAAAGATAAAATAAATAAGTTGATTTTAATGATATAAGCATCACAAATTTTACA TTAAGAAATACTGTGCAGGCCATGCGTGGTGGCTCAGGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGCA GATCACCGGAGGTCAGGAGTTCGAGACCAGCCTTGCCAACATAGTGAAACCCTGTCTCTACTAAAAAATACAAAAA TTAGCCGGGCATGGTGGCAGGCACCTGTAATCCCAGCTACTAGGGAGGCTTTTGAACCCAGGAGGCAGAGGTTGC AGCGAGCTGAGATCGCGCCACTGCACTCCAGCCTGGGTGATAGAGTGAGATTCAGTCTC

TGTTTGAAGATACTGTGGAGGAGCGTGTCATCAATGAAGAATATAAAATCTGGAAGAAGAATACACCGTTTCTAT ${\tt ATGACCIGGTT} \underline{{\tt ATG}} {\tt ACCCATGCTCTTCAGTGGCCCAGTCTTACCGTTCAGTGGCTTCCTGAAGTGACTAAACCTG}$ AAGGAAAAGATTATGCCCTTCATTGGCTAGTGCTGGGGACTCATACGTCTGATGAGCAGAATCATCTGGTGGTTG CTCGAGTACATATTCCCAATGATGATGCACAGTTTGATGCTTCCCATTGTGACAGTGACAAGGGTGAATTTGGTG ACATGCCGCAGAATCCTCACATCATTGCTACAAAAACACCATCTTCTGATGTGTTGTTTTTGACTATACAAAAC GTCTCTCCTGGAATTCAAATTTGAGTGGACATCTCCTAAGTGCATCTGATGACCATACTGTTTGTCTGTGGGATA TAAACGCAGGACCAAAAGAAGGCAAAATTGTGGATGCTAAAGCCATCTTTACTGGCCACTCAGCTGTTGTAGAGG ATGTGGCCTGGCACCTGCTGCACGAGTCATTGTTTGGATCTGTTGCTGATGATCAGAAACTTATGATATGGGACA CCAGGTCCAATACCACCTCCAAGCCGAGTCACTTGGTGGATGCGCACACTGCCGAAGTCAACTGCCTCTCATTCA ${\tt ATCCCTACAGCGAATTTATTCTAGCCACCGGTCTGCGGATAAGACCG} {\color{red}{\bf TAG}} {\tt CTTTATGGGATCTGCGTAACTTAAA}$ ATTAAAACTCCATACCTTCGAATCTCATAAAGATGAAATTTTCCAGGTCCACTGGTCTCCACATAATGAAACTAT TCTGGCTTCAAGTGGTACTGACCGCCGCCTGAATGTGTGGGGATTTAAGTAAAATTGGGGAAGAACAATCAGCAGA AGATGCAGAAGATGGGCCTCCAGAACTCCTGTTTATTCATGGAGGACACACTGCTAAGATTTCAGATTTTAGCTG GAACCCCAATGAGCCTTGGGTCATTTGCTCAGTGTCTGAGGATAACATCATGCAGATATGGCAAAATGGCTGAAAA TATTTACAATGATGAAGAGTCAGATGTCACGACATCCGAACTGGAGGGACAAGGATCTTAAACCCAAAGTACGAG AAATGTTTCTGTTGAATGTAATGCTACATGAATGCTTGATTTATCAAGCGCCAAAAAGGCATTGTATAGTAGGAA ATGTAAGTGGGGTGGCTTATGGCTTCTTTATCCTCTGATTCTAGCACTTTCAAGTGAGCTGTTGCGTACTGTATC GAATAACTTTTACACTTTTCCTTCCAACACTTCTTGATTGGCTTTGCAGAAATAAAGTTTTAAAAT

MTHALQWPSLTVQWLPEVTKPEGKDYALHWLVLGTHTSDEQNHLVVARVHIPNDDAQFDASHCDSDKGEFGGFGS VTGKIECEIKINHEGEVNRARYMPQNPHIIATKTPSSDVLVFDYTKHPAKPDPSGECNPDLRLRGHQKEGYGLSW NSNLSGHLLSASDDHTVCLWDINAGPKEGKIVDAKAIFTGHSAVVEDVAWHLLHESLFGSVADDQKLMIWDTRSN TTSKPSHLVDAHTAEVNCLSFNPYSEFILATGLRIRP

ATCACTGGTCTCGCGTGCCGTGACCAGGCCCGGTTTCCGGTGCCAGGACCTTTCCGAAGCGTCGAGTGGCCTAA CGGTCACAGCTGTCGCCCATCGGAGAGGCAGGACTACTGCGAGCAGTTTTACCGCGACCTCCGGAGGCCGGCGTG ACAGGCTCTGTCACTAAAATAGGAACCGAATATTGTATCTGACGCATCCTGTAATACTGAAGAGCAACTGAAGAC AGTTGATGATGTCCTTATTCATTGCCAGGTTATATATGATGCTCTGCAAAACCTGGATAAGAAGATTGATGTGAT TCGTAGAAAGGTTTCAAAAATCCAACGTTTCCATGCGAGATCCCTGTGGACAAATCATAAGCGATATGGATATAA ${\tt AAAGCATTCTTACCGGCTTGTTAAAAAGCTTAAACTCCAGAAA} \underline{{\tt ATG}} {\tt AGAAAAATGAGGTTTACGAGACATTCTC}$ CTACCCTGAAAGTTACAGCCCCACTTTACCAGTGTCAAGGCGTGAGAATAATTCCCCGAGCAACCTTCCAAGGCC ATCCTTTTGCATGGAAGAATACCAGCGAGCTGAGCTGGAGGAGGACCCGATCCTCAGCCGCACTCCGAGTCCAGT GCATCCCTCAGATTTCTCTGAGCATAATTGTCAGCCGTATTATGCATCTGATGGTGCAACGTATGGTTCTTCTTC AGGGCTCTGCCTTGGCAACCCTCGGGCTGACAGCATCCACAACACTTACTCAACTGACCATGCTTCTGCAGCACC CAGAAGCCATGAAATTGACGGGAAGGCTCTGCTCCTACTCACGAGTGACGTGTTGCTGAAGCACTTGGGGGTGAA ${\tt GCTGGGAACGGCTGTGAAGCTATGCTACTACATTGACCGACTTAAACAAGGAAAATGCTTTGAAAAAT{\underline{{\tt TGA}}}{\tt AAAAA}$ TCCTTGTGCAAATTTAGATTGGGCCAACTTCTAGAGGCACCAATGCCTTCTTAGTGTGGAATCATTTTTCTGCCC TTTAGTCGTTTTTGTTGTAGAAAGTATCTCTCAAAATATATTATAGCTAGAATTGTAGAACTATGTTATAGTC TTGATTCTGGTTCATCTCGATACAGAGAACCAAAACAGCTAAGAGAGGTATTATCAGGGTTGACAACTCCTATGA TCTGTCTGATGTTGCAGTATTCTACAAGTTTCCAGAAAGAGAATAGCCATATAAATTATTTTCCTTTCTGCTATT ATTTCTCTATATGTTTATTTATTCAGATTTAGAGTAAAAAATAAGCATATAAACTTTTATTATGTGCTCTTAAC AGTTTTAAGATAAACTATAGGATAGATAGAATGGTTATTTTATGCAAGAAATATTGTACCGCAAGGGTGGTTTGG ATGAAGTCTGACTACTTTTTTCAAACAAACTATTATATTAAAACTGTCATATTTTGGCTAAGTTTGGACCTATA ACTACACTTTCATTGTTTGCATCTCTCTATGAAGATACGTCTGTCCAAACTTTTAAAAGGCATAACTGTATTTTA TGTGTTTATTCTTATATAGATAGTATTTTATATTTTATTCTCACCCGAAGTATTCACACAATCTTTTTAAAAAA AATTTGAAATGGCATTTTGTATTGCCACAGAGGTAGGATGAGCCATATATTAGTGAAATGTTTTATTTTGTAAAA TACACTTTGAATGATACATTAATTCAGACTAATCTTTGGGGGCTTTATTTTGTAAGTTAGAACTTTCAAGGGAAA CATGTTCAACACTATTATTTTGTTATAAATTTATAACTTTGTTATTACATTGTGTAACAAATATAAGGTTTACGA GCTATGAGAATTGGTGCTATCACCATTAGCTATTTGCTGTAATGTCAAGAAAATGTTCACCAGATGCAAGAATGT ACCTTTTCTTTTTAGAAAGCCAAATGTACTTTAGACATGAATGCAACTATTTAAAGAATAGCTTCATCAATGTTA TTGAACAGTCCTCAGGTGTTTACATAAATACTATGTTTTACAGTTTTCATATTTTAAAATATTAATAAAGTTAAA TCACAATAGT

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 ${\tt MSESISKSSQPLASKQEKDGTEKRSWGRPRKQPLVSPRTALGGSQKEPSEVPKPKRPQGRPNGRKNKDAAKTWKTTTTPGRKPRGRPKKLEKEEEEGISQESSEEEQ}$

ACTGAGGCGTGGCGTCTGCTGGGGCACCTGAAGGAGACTTGGGGGCACCCGCGTCGTGCCTCCTGGGTTGTGAGG AGTCGCCGCTGCCGCCACTGCCTGTGCTTCATGAGGAAGATGCTCGCCGCCGTCTCCCGCGTGCTGTCTGGCGCT TCTCAGAAGCCGGCAAGCAGAGTGCTGGTAGCATCCCGTAATTTTGCAAATGATGCTACATTTGAAATTAAGAAA TGTGACCTTCACCGGCTGGAAGAAGGCCCTCCTGTCACAACAGTGCTCACCAGGGAGGATGGGCTCAAATACTAC AGGATGATGCAGACTGTACGCCGAATGGAGTTGAAAGCAGATCAGCTGTATAAACAGAAAATTATTCGTGGTTTC TGTCACTTGTGTGATGGTCAGGAAGCTTGCTGTGTGGGCCTGGAGGCCGGCATCAACCCCACAGACCATCTCATC CGAAAAGGAGGTTGTGCTAAAGGGAAAGGAGGATCGATGCACATGTATGCCAAGAACTTCTACGGGGGCAATGGC ATCGTGGGAGCGCAGGTGCCCCTGGGCGCTGGGATTGCTCTAGCCTGTAAGTATAATGGAAAAGATGAGGTCTGC CTGACTTTATATGGCGATGGTGCTGCTAACCAGGGCCAGATATTCGAAGCTTACAACATGGCAGCTTTGTGGAAA ACAAGGTTTGCTGCCTATTGTAGATCTGGGAAGGGGCCCATCCTGATGGAGCTGCAGACTTACCGTTACCAC GGACACAGTATGAGTGACCCTGGAGTCAGTTACCGTACACGAGAAGAAATTCAGGAAGTAAGAAGTAAGAGTGAC CCTATTATGCTTCTCAAGGACAGGATGGTGAACAGCAATCTTGCCAGTGTGGAAGAACTAAAGGAAATTGATGTG GAAGTGAGGAAGGAGTTGAGGATGCTGCCCAGTTTGCCACGGCCGATCCTGAGCCACCTTTGGAAGAGCTGGGC
 TAAGGGGAGAGGAGAGGGTTATACCTTCAGGGGGCTACCAGACAGTGTTCTCAACTTGGTTAAGGAGGAAGA
 AAACCCAGTCAATGAAATTCAATGAAATTCTTGGAAACTTCCATTAAGTGTGTAGATTGAGCAGGTAGTAATTGC ATGCAGTTTGTACATTAGTGCATTAAAAGATGAATTATTGAGTGCTT

MRKMLAAVSRVLSGASQKPASRVLVASRNFANDATFEIKKCDLHRLEEGPPVTTVLTREDGLKYYRMMQTVRRME LKADQLYKQKIIRGFCHLCDGQEACCVGLEAGINPTDHLITAYRAHGFTFTRGLSVREILAELTGRKGGCAKGKG GSMHMYAKNFYGGNGIVGAQVPLGAGIALACKYNGKDEVCLTLYGDGAANQGQIFEAYNMAALWKLPCIFICENN RYGMGTSVERAAASTDYYKRGDFIPGLRVDGMDILCVREATRFAAAYCRSGKGPILMELQTYRYHGHSMSDPGVS YRTREEIQEVRSKSDPIMLLKDRMVNSNLASVEELKEIDVEVRKEIEDAAQFATADPEPPLEELGYHIYSSDPPF EVRGANQWIKFKSVS

GGGCGCAGCACTCCCAGCCGGCCGCAGCCTGACACGCCGCGCGCCCCCAGTCTCCCGCGGCTGCTCCCCCA ${\tt GGCATGGCACAGGGCCTCACT} \underline{{\tt ATG}} {\tt GCAGCAGCACGCACGCCTCGACTTCATGCTCGGCGCCAAAG}$ CTGATGGTGAGACCATTCTAAAAGGCCTCCAGTCCATTTTCCAGGAGCAGGGGATGGCGGAGTCGGTGCACACCT GGCAGGACCATGGCTÄTTTAGCAACCTACACAAACAAGAACGGCAGCTTTGCCAATTTGAGAATTTACCCACATG GATTGGTGTTGCTGGACCTTCAGAGTTATGATGGTGATGCGCAAAGCAAGAAGAAGAAGACAGTATTTTGAACA AAGTAGAGGAAAGAATGAAAGAATTGAGTCAGGACAGTACTGGGCGGGTGAAACGATTACCACCCATAGTGCGAG GAGGAGCCATCGACAGATACTGGCCCACCGCCGACGGGCGCCTGGTTGAATATGACATAGATGAAGTGGTATATG ACGAAGATTCACCTTATCAAAATATAAAAATTCTACACTCGAAGCAGTTTGGAAATATTCTCATCCTTAGTGGGG ATGTTAATTTGGCAGAGAGTGATTTGGCATATACCCGGGCCATCATGGGCAGTGGCAAAGAAGATTACACTGGCA AAGATGTACTCATTCTGGGAGGTGGAGACGGAGGCATATTGTGTGAAATAGTCAAACTAAAACCAAAGATGGTCA CTATGGTAGAGATTGACCAAATGGTGATTGATGGGTGTAAGAAATACATGCGAAAAACGTGTGGCGATGTCTTAG ACAATCTTAAAGGAGACTGCTATCAGGTTCTAATAGAAGACTGTATCCCGGTACTGAAGAGGTACGCCAAAGAAG GGAGAGAATTTGATTATGTGATTAATGATTTGACAGCTGTTCCAATCTCCACGTCTCCAGAAGAAGAATTCCACAT GGGAGTTTCTCAGACTGATTCTTGACCTCTCAATGAAAGTGTTGAAACAGGATGGGAAATATTTTTACACAGGGGA ACTGTGTCAATCTGACAGAAGCACTGTCGCTCTATGAAGAACAGCTGGGGGCGCCTGTATTGTCCTGTGGAATTTT ${\tt CAAAGGAGATCGTCTGTGTCCCTTCATACTTGGAATTGTGGGTATTTTACACTGTTTGGAAGAAAGCTAAACCC} \underline{{\tt T}}$ \underline{GA} AGATCAGTAGCCCCTAATCACATGTGCTGCAAATAGCCTTCCTGACCTCCATATGCTGTACATGACATCAAAA ${\tt TGGAAAATGTATATTTTGATGAGGTGTTTTTTTTTTTGAAAGTCAGCTGAAGGATGGTTAGACAGCACAG}$ ${\tt CGAAGACTGCTAAATGCACTGACCCCCCATTAGAATGTGATTTTTGTTCCTTTTTATTTCTCTGTGGGCTTTT}$ GTTTTTGTTTTGGTAGATCTTCAATTTGGATATTTGGAGGAGTGAACATCGTTGTTTTGCTGGAGGGAA

MAAARHSTLDFMLGAKADGETILKGLQSIFQEQGMAESVHTWQDHGYLATYTNKNGSFANLRIYPHGLVLLDLQS
YDGDAQGKEEIDSILNKVEERMKELSQDSTGRVKRLPPIVRGGAIDRYWPTADGRLVEYDIDEVVYDEDSPYQNI
KILHSKQFGNILILSGDVNLAESDLAYTRAIMGSGKEDYTGKDVLILGGGDGGILCEIVKLKPKMVTMVEIDQMV
IDGCKKYMRKTCGDVLDNLKGDCYQVLIEDCIPVLKRYAKEGREFDYVINDLTAVPISTSPEEDSTWEFLRLILD
LSMKVLKQDGKYFTQGNCVNLTEALSLYEEQLGRLYCPVEFSKEIVCVPSYLELWVFYTVWKKAKP

TTTGGCCCGAACGCCGCGGGGGCGCTGATCATGGCGACATTCATCTCGGTGCAGCTGAAAAAAAGACCTCAGAGGT GGACCTGGCCAAGCCGCTGGTGAAGTTCATCCAGCAGACTTACCCAAGCGGCGGGGAAGAGCAGGCCCAGTACTG CGAGACGCTCCTGAGATATTATGATCAGATTTGTTCTATTGAACCCAAATTCCCATTTTCTGAAAATCAGATCTG CTTGACATTTACCTGGAAGGATGCTTTCGATAAAGGTTCACTTTTTGGAGGCTCTGTAAAACTGGCTCTTGCAAG GGATAATGATGAAGGATTGAAAATCGCTGCTAAACATTACCAGTTTGCTAGTGGTGCCTTTTTACATATTAAAGA GACGGTTTTATCTGCCTTAAGTCGAGAGCCGACCGTGGACATATCTCCAGATACTGTTGGGACCCTCAGTCTTAT TATGCTGGCACAGGCTCAAGAAGTATTTTTTTTAAAAGCCACAAGAGATAAAATGAAAGATGCCATCATAGCTAA ATTGGCTAATCAGGCTGCAGATTATTTTGGTGATGCTTTCAAACAGTGTCAATACAAAGATACTCTCCCCAAGGA GGTGTTCCCTGTCTTGGCTGCAAAGCACTGTATCATGCAGGCCAATGCTGAGTACCATCAGTCTATCCTGGCAAA ACAGCAGAAGAAATTTGGAGAAGAATTGCAAGGTTACAGCATGCAGCAGAACTGATTAAAACAGTGGCATCTCG TGACTTCATTTATCATGATCGAGTTCCAGACCTTAAAGATCTAGATCCTATTGGCAAAGCCACACTTGTGAAATC TACCCCGGTCAATGTACCCATCAGTCAGAAATTTACTGATCTGTTTGAGAAGATGGTTCCCGTGTCAGTACAGCA TTTGGCAAATGGGGTGCTAGCTTCCCTTAATCTTCCAGCAGCAATTGAAGATGTGTCTGGAGACACTGTACCTCA GTCTATATTGACTAAATCCAGATCTGTGATTGAACAGGGAGGCATCCAGACTGTTGATCAGTTGATTAAAGAACT GCCTGAATTACTGCAACGAAATAGAGAAATCCTAGATGAGTCATTAAGGTTGTTGGATGAAGAAGAAGCAACCGA TAATGATTTAAGAGCAAAATTTAAGGAACGTTGGCAAAGGACACCATCCAATGAACTGTATAAGCCTTTAAGAGC TCATCGTGACACCATCGTGCTTTTGTGTAAGCCAGAGCCTGAGCTGAATGCTGCCATCCCTTCTGCTAATCCAGC AAAGACCATGCAGGGCAGTGAGGTTGTAAATGTCTTAAAATCCTTATTGTCAAATCTTGATGAAGTAAAGAAGGA AGATGGTGTGATAAATGAAGAAGCTCTTTCTGTTACTGAACTAGATCGAGTCTATGGAGGTCTTACAACTAAAGT CCAAGAATCTCTAAAGAAACAGGAGGGACTTCTTAAAAATATTCAGGTCTCACATCAGGAATTTTCAAAAATGAA ACAATCTAATAATGAAGCTAACTTAAGAGAAGAAGTTTTGAAGAATTTAGCTACTGCATATGACAACTTTGTTGA ACTTGTAGCTAATTTGAAGGAAGGCACAAAGTTTTACAATGAGTTGACTGAAATCCTGGTCAGGTTCCAGAACAA ATGCAGTGATATAGTTTTTGCACGGAAGACAGAAAGAGATGAACTCTTAAAGGACTTGCAACAAAGCATTGCCAG AGAACCTAGTGCTCGTACAATTCCTACACCTGCGTATCAGTCCTCACCAGCAGGAGGACATGCACCACTCCTCCA AATCGAGCTCCTTCTGCTACTGCTCCATCTCCAGTGGGGGCTGGGACTGCTGCGCCAGCTCCATCACAAACGCCT GGCTCAGCTCCTCCTCCACAGGCGCAGGGACCACCCTATTXCCCCCTATCCAGGATATCCTGGGTATTGCCAAAT GCCCATGCCCATGGGCTATAATCCTTATGCGTATGGCCAGTATAATATGCCATATCCACCAGTGTATCACCAGAG TCCTGGACAGGCTCCATACCCGGGACCCCAGCAGCCTTCATACCCCTTCCCTCAGCCCCCACAGCAGTCTTACTA **AGTGTACTAAACTCTACGCTCTGGTTAATGTAATGTACTCTCCTGGACTGAATGCAGTGTATAATTTCTGTCTAC** AGCTAGAAGCTGTGCCCCAGTTCCACATTTGATTACACATGTGAGATTTGCTGCTGTTGCAGTATAAACACTAGG TATAATAGGATTTGAAATTGCATTACAGTTCATAAAAATTGAAAATGAGAAATTAAACCTGCAAGTGAAACATTT GAAACGATTATACTTTCTACATAAGACATGGTTGGGACATCAGATACTTACAAAGATGGTTTAAGTATGGATACT AGAGAAAATTAAGTTTTCTTTTCTTTTGGTTTATTGATTTTGGTTTAATTTCCATTATGCTATTTTTGCATAATCAA TGCATGAATAGTACAAGTTATTATCAAGGATGTTTTACAGGGAAATCAAAAGAATATTATCATACTTTATCTTTC CCAAAGATTCTTCAAATAAACATACAAATAAATGTGTATATTTAATGTTTTATTGTTAGCTTCTCCAGAAAATTG ATGCAAATTCTGGTAATAATTCTTGCATTTTTTCCCCAATAACCTGGTTAAAATAGAATACGCCAT

GATCTCACCACCTTGGATGTTACCAAGTTGACGCCACTTTCACACGAAGTTATCAGCAGACAAGCCACAATTAAC ATAGGTACAATTGGTCATGTAGCTCATGGGAAATCCACAGTCGTCAAAGCTATTTCTGGAGTTCATACTGTCAGG TTCAAAAATGAACTAGAAAGAAATATTACAATCAAGCTTGGATATGCTAATGCTAAGATTTATAAGCTTGATGAC CCAAGTTGCCCTCGGCCAGAATGTTATAGATCTTGTGGGAGCAGTACACCTGACGAGTTTCCTACGGACATTCCA GGGACCAAAGGGAACTTCAAATTAGTCAGACATGTTTCCTTTGTTGACTGTCCTGGCCACGATATTTTGATGGCT ACTATGCTGAACGGTGCAGCAGTGATGGATGCAGCTCTTCTGTTGATAGCTGGTAATGAATCTTGCCCTCAGCCT CAGACATCGGAACACCTGGCTGCTATAGAGATCATGAAACTGAAGCATATTTTGATTCTACAAAATAAAATTGAT TTGGTAAAAGAAGTCAGGCTAAAGAACAATACGAGCAGATCCTTGCATTTGTCCAAGGTACAGTAGCAGAGGGA CCAGTACCCCCAAGAGACTTTACTTCAGAGCCCCGGCTTATTGTTATTAGATCTTTTGATGTCAACAAACCTGGC TGTGAAGTTGATGACCTTAAGGGAGGTGTAGCTGGTGGTAGTATCCTAAAAGGAGTATTAAAAGGTGGGCCAGGAG ATAGAAGTAAGACCTGGTATTGTTTCCAAAGATAGTGAAGGAAAACTCATGTGTAAACCAATCTTTTCCAAAATT GTATCACTTTTTGCGGAGCATAATGATCTGCAATATGCTGCTCCAGGCGGTCTTATTGGAGTTGGAACAAAAATT GACCCCACTTTGTGCCGGGCTGACAGAATGGTGGGGCCAAGTACTTGGTGCAGTCGGAGCTTTACCTGAGATATTC ACAGAATTGGAAATTTCCTATTTCCTGCTTAGACGCCTTCTAGGTGTACGCACTGAAGGAGGACAAGAAAGCAGCA AAGGTTCAAAAGCTGTCTAAGAATGAAGTGCTCATGGTGAACATAGGATCCCTGTCAACAGGAGGAGGAGTTAGT GCTGTCAAGGCCGATTTGGGTAAAATTGTTTTGACCAATCCAGTGTGCACAGAGGTAGGAGAAAAAATTGCCCTT AGCCGAAGAGTTGAAAAACACTGGCGTTTAATTGGTTGGGGTCAGATAAGAAGAGAGTGACAATCAAGCCAACA ${\tt GTAGATGAC} {\color{blue}{\textbf{TGA}}} {\color{blue}{\textbf{AGATACCAGTTAAATAATACATTCGGATGGATTTGGAAGTTGGAATTCCTCTTAACAAC}}$ CAAGGGGTTTATTTCAAAGCAATATTGGGGAATTGATTTCACAGTTCGTTACCTTAGTAGGTAACGGTAAGGTT ATTCTCTTTTTTTTTTTTTTTGGTTATGAAAACTTAGGGACTAAAATTAATATAAAAATTGGCATAATGTTGGAT TGAATCTACATTTTGGCAGAAGTTAAACATTCCCACATAATGTCAAAATTATACATCATGCAGTTCTGTTTTTTT GTTTGTTTAATTTTGTTTTTGAGTCTGGCTCTGTCACCCAGGCTGGAGTGCAGTGGCGTGATCTGCAACC TCTGCCCCCGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCGAGTAGCTGAGATTACAGGTGCGCGCCACCACA CTTGGCTAATTTTTGTATTATTAGTAGAGACGGGGTTTCAGCATGTTGGCTAGGCCGGTCTCTCCTGACCTCAGG GTGATCAGCCCACCTCGGCCTCACAAAGTGCTGGGATTACAGGCGTGAGCCACCTTGCCCAGCCCACATCATACA GTTTGAAATGAAACTTTGCCACAACCAGCCTTTGCTGTAGCACACATATATCACTGAACCTGTTTGAAATAAA GTTTTTTTCTTTTCATGATTCGTCTTTGAGTACCTCCAGGCTGAAAGACTGTTGTACCAGTAAAAACTTAAAG GCACAAATTCTCCTTGAAGACCTTCTCCCTTTTATGTGGCCCCATATTTTATGTTGCTTTATCTTTGAAATTTTG CATGAAAAGGAAATGAATGGATTCGAATGAAATTGTCCTTTAGAGCATGATTACTTGTTCCCATGGACAAATATT TTTCTCCCCTTGCTCTTCCTGGCCTGAAACACGGGAAACCAGAGTCAAAAGTTATCTCCCTCTCCCTGTGATGCC TTGAGATTTTTTTCTGCGTTGTTTAATGCCTGAAATCCAAGTCTTCCTCCATGGGAAAATACTGTTATACCAAAT AATTCTAGATGAGTAACAAAGATCTTTTTAGGCCTTCATTTTATGTTTTTTCTTAACTGTTATATTATGATTGTG ΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑ

MAGGEAGVTLGQPHLSRQDLTTLDVTKLTPLSHEVISRQATINIGTIGHVAHGKSTVVKAISGVHTVRFKNELER NITIKLGYANAKIYKLDDPSCPRPECYRSCGSSTPDEFPTDIPGTKGNFKLVRHVSFVDCPGHDILMATMLNGAA VMDAALLLIAGNESCPQPQTSEHLAAIEIMKLKHILILQNKIDLVKESQAKEQYEQILAFVQGTVAEGAPIIPIS AQLKYNIEVVCEYIVKKIPVPPRDFTSEPRLIVIRSFDVNKPGCEVDDLKGGVAGGSILKGVLKVGQEIEVRPGI VSKDSEGKLMCKPIFSKIVSLFAEHNDLQYAAPGGLIGVGTKIDPTLCRADRMVGQVLGAVGALPEIFTELEISY FLLRRLLGVRTEGDKKAAKVQKLSKNEVLMVNIGSLSTGGRVSAVKADLGKIVLTNPVCTEVGEKIALSRRVEKH WRLIGWGQIRRGVTIKPTVDDD

ATCCTGACTTCCGCTTTGGAGGCGAGGACCCGAGCGAGTGTAGGGGGTGCGGCGTCTGGTCAGCCAGGGGTGAAT ${\tt TCTCAGGACTGGTCGGCAGTCAAGCCATC} \underline{{\tt ATG}} {\tt CCTCGTGGTCAGAAGAGTAAGCTCCGTGCCCGTGAGAAACGCC}$ GCAAGGCCCGAGATGAGACCCGGGGTCTCAATGTTCCTCAGGTCACTGAAGCAGAGGAAGAAGAGGCCCCCTGCT GTTCCTCTTCTGTTTCTGGGGGTGCTGCTTCAAGCTCTCCTGCTGCTGCAGAAGCCTCAGAAGCCTCAGAAGCCCC CAACCACTGCCGCTGCTGCGGCTGTTTCATCCACAAAATCTAAAAAAGGTGCCAAGAGCCACCAAGGTG AGAAAAATGCAAGTTCCTCCCAGGCCTCAACATCCACTAAGAGCCCAAGCGAAGATCCTCTAACCAGGAAGTCAG GGTCGTTGGTGCAGTTCCTGTTGTACAAGTATAAAATAAAAAAGTCCGTTACAAAGGGAGAAATGCTGAAAATTG TTGGCAAAAGGTTCAGGGAGCACTTCCCTGAGATCCTCAAGAAAGCCTCTGAGGGCCTCAGTGTTGTCTTTGGCC TTGAGCTGAATAAAGTCAACCCCAACGGCCACACTTACACCTTCATCGACAAGGTAGACCTCACTGATGAGGAAT ${\tt CCCTGCTCAGTTCCTGGGACTTTCCCAGGAGAAAGCTTCTGATGCCTCTCCTGGGTGTGATCTTCTTAAATGGCA}$ ACTCAGCTACTGAGGAAGAGCTCTGGGAATTCCTGAATATGTTGGGAGTCTATGATGGAGGAGGAGCACTCAGTCT TTGGGGAACCCTGGAAGCTCATCACCAAAGATCTGGTGCAGGAAAAATATCTGGAGTACAAGCAGGTGCCCAGCA GTGATCCCCCACGCTTTCAATTCCTGTGGGGTCCGAGAGCCTATGCTGAAACCAGCAAGATGAAAGTCCTGGAGT TTTTGGCCAAGGTAAATGGTACCACCCCTGTGCCTTCCCAACCCATTACGAAGAAGCTTTGAAAGATGAAGAGA TTACCTGCTGTTCTCACCCCCAATGAGGTCTTAGGCAGATTCTTTACTTTGTAATTCAAAAGGCCTGTTAACCTT TAGATTCAGAATGTAAATTTACAAATGATATAGATCACCCTGTTATTGCTGTTTTTCAGGGACAGTAGAAAGTGT TTTGTTTTTTGAGTGAAACAACTTATTAATAAAAATCCTTAAATCACTTTTGTAATCCAGGACAAGAAAATGTGG CATTAGAGTAGAAATATCTTTGGAAATGTGAAAGACCCCATAGTGAAATATTTGGGATCAGAAGCCAGAGGTGTA TTCAAGAATGTGTGAGAAATTAAACCATAGTTAGTTAA

MPRGQKSKLRAREKRRKARDETRGLNVPQVTEAEEEEAPCCSSSVSGGAASSSPAAGIPQKPQRAPTTAAAAAAG VSSTKSKKGAKSHQGEKNASSSQASTSTKSPSEDPLTRKSGSLVQFLLYKYKIKKSVTKGEMLKIVGKRFREHFP EILKKASEGLSVVFGLELNKVNPNGHTYTFIDKVDLTDEESLLSSWDFPRRKLLMPLLGVIFLNGNSATEEEIWE FLNMLGVYDGEEHSVFGEPWKLITKDLVQEKYLEYKQVPSSDPPRFQFLWGPRAYAETSKMKVLEFLAKVNGTTP CAFPTHYEEALKDEEKAGV

CTCCTCTAGGCCGCCGGCCGCAAGCGCTGAGTCACGGTGAGGCGACTGGACCCACACTCTCTTAACCTGCCCTC CCTGCACTCGCTCCCGGCGGCTCTTCGCGTCACCCCCGCCGCTAAGGCTCCAGGTGCCGCTACCGCAGCGTGAGT ACCTGGGGCTCCTGCAGGGGTCCACTAGCCCTCCATCCTCTACAGCTCAGCATCAGAACACTCTCTTTTTAGACT TCCGGAGAAGCATTGGCAGACCCGAGTTAAAAAATCTGGATCCGTTTTTACTGTTTGATGAATTTAAAGGAGGTA GACCAGGAGGATTTCCTGATCATCCACATCGAGGTTTTGAAACAGTATCCTACCTCCTGGAAGGGGGCAGCATGG CCCATGAAGACTTCTGTGGACACACTGGTAAAATGAACCCAGGAGATTTGCAGTGGATGACTGCGGGCCGGGGCA TTCTGCACGCTGAGATGCCTTGCTCAGAGGAGCCAGCCCATGGCCTACAACTGTGGGTTAATTTGAGGAGCTCAG AGAAGATGGTGGAGCCTCAGTACCAGGAACTGAAAAGTGAAGAAATCCCTAAACCCAGTAAGGATGGTGTGACAG TTGCTGTCATTTCTGGAGAAGCCCTGGGAATAAAGTCCAAGGTTTACACTCGCACACCAACCTTATATTTGGACT TCAAATTGGACCCAGGAGCCAAACATTCCCAACCTATCCCTAAAGGGTGGACAAGCTTCATTTACACGATATCTG GAGATGTGTATATTGGGCCCGATGATGCACAACAAAAAATAGAACCTCATCACACAGCAGTGCTTGGAGAAGGTG ACAGTGTCCAGGTGGAGAACAAGGATCCCAAGAGAAGCCACTTTGTCTTAATTGCTGGGGAGCCATTAAGAGAAC CAGTTATCCAACATGGTCCATTTGTGATGAACACCAATGAAGAGATTTCTCAAGCTATTCTTGATTTCAGAAACG ${\tt CAAAAAATGGGTTTGAAAGGGCCAAAACCTGGAAATCAAAGATTGGGAAC\underline{{\tt TAG}}{\tt TGGAAAGCGGAAGAGCAGGTCT}$ TGATGTGTCCTAGAATTTTGCCATTTCTGAGATTGAGCCATTGAAGGCATTCCATTTCTAAAGCTTATTTAGCCG GTGCTTCTAAAGAATTCCACACTAACGTGATAACATGGTTTTTGTAACAATAAATGTAGGATATTTCCTGGCACA

MGSSKKVTLSVLSREQSEGVGARVRRSIGRPELKNLDPFLLFDEFKGGRPGGFPDHPHRGFETVSYLLEGGSMAH EDFCGHTGKMNPGDLQWMTAGRGILHAEMPCSEEPAHGLQLWVNLRSSEKMVEPQYQELKSEEIPKPSKDGVTVA VISGEALGIKSKVYTRTPTLYLDFKLDPGAKHSQPIPKGWTSFIYTISGDVYIGPDDAQQKIEPHHTAVLGEGDS VQVENKDPKRSHFVLIAGEPLREPVIQHGPFVMNTNEEISQAILDFRNAKNGFERAKTWKSKIGN

CTCTCTGCTCCTCTGTTCTACAGTCAGCCGCATCTTCTTTTGCATCGTCAGCCAAACCACATCCCTGAGACACC ATGGGGAAGGTGAAGGTCGACTCAACAGATTTGGTCGTACTGGGCGCCTGGTCACCAGGGCTGCTTTTAACTCT GGTAAAGTGGATATTGTTGCCATCAATGACCCCTTCATTGACCTGAACTACATGGTTTACATGTTCCAATATGAC TCCACCCATAGCAAATTCCATGGCACCGTCAAGGCTGAGAATGGGAAGCTTGTCATCAATGGAAATCCCATCACC ATCTTCCAGGAGCGAGATCCCTCCAAAATCAAGTGGGGCGATGCTGGCGCTGAGTACGTCATGGAGTCCACTGGC GCTGATGCCCCAATGTTTGTCATGGGTGTGAACCATGAGAAGTATGACAACAACCTCAAGATTGTCGGCAGTGCC TTCTGCACCACCACTGCTTAGCACCCCTGGCCAAGGTCATCCATGACAACTTTGGTATCGTGGAAGGACTCATG ACCATAGTCCACGCCATCACTGCCACCCAGAAGACTGTGGATGGCCCCTCCGGGAAACTGTGGCGTGATGGCCAC GGGGCTCTCCAGAACATCATCCCTGCCTCTACTGGCACTGCGAAGGCTATGGGCAAGGTCATCCCTGAGCTGAAC GGGAAGCTCACTGGCATGGCCTTCTGTGTCCCCACTGCCGTGTCAGTGGTGGACCTGACCTGCCGTCTGGAAAAA CCTGCCAAATATGATGACACCAAGAAGGTGGTGAAGCAGGCATCGGAGGGCCCCCTCAAGGGCATCCTGGGCTAC ACTGAGCACCAGGTGGTCTCCTCCGACTTCAACAGCAACACCCACTCTTCCACCTTCAATGCTGGGGCTGTCATT GCCCTCAACAACCACTTTTTCAAGCTCATTTCCTGGTATGACAATGAATTTGGCTACAGCAACAGGATGGTGGAC AGACCCTCACTGCTGGGGAGTCCCTGCCACACTCAGTCCCCCACCACACTGAATCTCCCCTCCTCACAGTTTCCA TGTAGACCCCTTGAAGAGGGGAGGGGCCTAGGGAGCCCCACCTTGTCATATACCATCAATAAAGTACCCTGTGCT CAGCC

6664/6881 FIGURE 6153A

ACGTCTTCCTCTTTGTCTGGTATTACCGGGTTTATGATATTCCACCTAAGTTCTTTTACACAAGAAAACTTCTTG GGTCAGCACTGGCCAGGGCCCTGCAGCCTGCCTGAATTTCAACTGCATGCTGATTCTCTTGCCAGTCT GTCGAAATCTGCTGTCCTCAGGGGTTCCAGTGCGTGCTGCTCAACAAGAGTTCGAAGACAACTGGACAGGA ATCTCACCTTTCATAAAATGGTGGCATGGATGATTGCACTTCACTCTGCGATTCACACCATTGCACATCTATTTA ATGTGGAATGGTGTGAATGCCCGAGTCAATAATTCTGATCCTTATTCAGTAGCACTCTCTGAACTTGGAGACA GGCAAAATGAAAGTTATCTCAATTTTGCTCGAAAGAGAATAAAGAACCCTGAAGGAGGCCTGTACCTGGCTGTGA TCCGGAGGTCTTACTTTGAAGTCTTTTGGTACACACATCATCTCTTTGTGATCTTCATTGGCCTTGCCATCC ATGGAGCTGAACGAATTGTACGTGGGCAGACCGCAGAGAGTTTGGCTGTGCATAATATAACAGTTTGTGAACAAA AAATCTCAGAATGGGGAAAAATAAAGGAATGCCCAATCCCTCAGTTTGCTGGAAACCCTCCTATGACTTGGAAAT GGATAGTGGGTCCCATGTTTCTGTATCTCTGTGAGAGGTTGGTGCGGTTTTGGCGATCTCAACAGAAGGTGGTCA TCACCAAGGTGGTCACTCACCCTTTCAAAACCATCGAGCTACAGATGAAGAAGAAGGGGGTTCAAAATGGAAGTGG GACAATACATTTTTGTCAAGTGCCCAAAGGTGTCCAAGCTGGAGTGGCACCCTTTTACACTGACATCCGCCCCTG AGGAAGACTTCTTTAGTATCCATATCCGCATCGTTGGGGACTGGACAGAGGGGGCTGTTCAATGCTTGTGGCTGTG ATAAGCAGGAGTTTCAAGATGCGTGGAAACTACCTAAGATAGCGGTTGATGGGCCCTTTGGCACTGCCAGTGAAG ATGTGTTCAGCTATGAGGTGGTGATGTTAGTGGGAGCAGGGATTGGGGTCACACCCTTCGCATCCATTCTCAAGT CAGTCTGGTACAAATATTGCAATAACGCCACCAATCTGAAGCTCAAAAAGATCTACTTCTACTGGCTGTGCCGGG ACACACATGCCTTTGAGTGGTTTGCAGATCTGCTGCAACTGCTGGAGAGCCAGATGCAGGAAAGGAACAATGCCG GCTTCCTCAGCTACAACATCTACCTCACTGGCTGGGATGAGTCTCAGGCCAATCACTTTGCTGTGCACCATGATG AGGAGAAAGATGTGATCACAGGCCTGAAACAAAAGACTTTGTATGGACGGCCCAACTGGGATAATGAATTCAAGA CAATTGCAAGTCAACACCCTAATACCAGAATAGGAGTTTTCCTCTGTGGACCTGAAGCCTTGGCTGAAACCCTGA GTAAACAAAGCATCTCCAACTCTGAGTCTGGCCCTCGGGGAGTGCATTTCATTTTCAACAAGGAAAACTTC<u>TAA</u>C TTGTCTCTTCCATGAGGAAATAAATGTGGGTTGTGCTGCCAAATGCTCAAATAATGCTAATTGATAATATAAATA CCCCTGCTTAAAAATGGACAAAAAGAAACTATAATGTAATGGTTTTCCCTTAAAGGAATGTCAAAGATTGTTTG ATAGTGATAAGTTACATTTATGTGGAGCTCTATGGTTTTGAGAGCACTTTTACAAACATTATTTCATTTTTTCC TCTCAGTAATGTCAGTGGAAGTTAGGGAAAAGATTCTTGGACTCAATTTTAGAATCAAAAAGGGAAAGGATCAAAA GGTTCAGTAACTTCCCTAAGATTATGAAACTGTGACCAGATCTAGCCCATCTTACTCCAGGTTTGATACTCTTTC CACAATACTGAGCTGCCTCAGAATCCTCAAAATCAGTTTTTATATTCCCCAAAAGAAGAAGGAAACCAAGGAGTA GCTATATATTTCTACTTTGTGTCATTTTTGCCATCATTATTATCATACTGAAGGAAATTTTCCAGATCATTAGGA CATAATACATGTTGAGAGTGTCTCAACACTTATTAGTGACAGTATTGACATCTGAGCATACTCCAGTTTACTAAT CAATGCCAAGATAGAATTAATTTAAAGCCTTAAACAAAATTTATCTAAAGAAATAACTTCTATTACTGTCATAGA CCAAAGGAATCTGATTCTCCCTAGGGTCAAGAACAGGCTAAGGATACTAACCAATAGGATTGCCTGAAGGGTTCT GCACATTCTTATTTGAAGCATGAAAAAAGAGGGTTGGAGGTGGAGAATTAACCTCCTGCCATGACTCTGGCTCAT CTAGTCCTGCTCCTTGTGCTATAAAATAAATGCAGACTAATTTCCTGCCCAAAGTGGTCTTCTCCAGCTAGCCCT TATTTTCCGTAAATACACACACAAAATGGATCGCATCTGTGTGACTAATGGTTTATTTGTATTATCATCATCATCA TCATCCTAAAATTAACAACCCAGAAACAAAAATCTCTATACAGAGATCAAAATTCACACTCAATAGTATGTTCTGA ATATATGTTCAAGAGAGAGTCTCTAAATCACTGTTAGTGTGGCCAAGAGCAGGGTTTTCTTTTTGTTCTTAGAAC TGCTCCCATTTCTGGGAACTAAAACCAGTTTTATTTGCCCCACCCCTTGGAGCCACAAATGTTTAGAACTCTTCA ACTTCGGTAATGAGGAAGAAGAGAGAGAGAGGCTGGGGGAAGGCAGAAGACTGGTTTAGGAGGAAAAAGGAAATAAG GTCATTCCCTGCCCCAGATTTCTTAAAGTTTGATATGTATAGAATATAATTGAAGGAGGTATACACATATTGATG TTGTTTTGATTATCTATGGTATTGAATCTTTTAAAATCTGGTCACAAATTTTGATGCTGAGGGGGGATTATTCAAG GGACTAGGATGAACTAAATAAGAACTCAGTTGTTCTTTGTCATACTACTATTCCTTTCGTCTCCCAGAATCCTCA GGGCACTGAGGGTAGGTCTGACAAATAAGGCCTGCTGTGCGAATATAGCCTTTCTGAAATGTACCAGGATGGTTT

6665/6881 FIGURE 6153B

6.666/6881 FIGURE 6154

MGNWAVNEGLSIFVILVWLGLNVFLFVWYYRVYDIPPKFFYTRKLLGSALALARAPAACLNFNCMLILLPVCRNL LSFLRGSSACCSTRVRRQLDRNLTFHKMVAWMIALHSAIHTIAHLFNVEWCVNARVNNSDPYSVALSELGDRQNE SYLNFARKRIKNPEGGLYLAVTLLAGITGVVITLCLILIITSSTKTIRRSYFEVFWYTHHLFVIFFIGLAIHGAE RIVRGQTAESLAVHNITVCEQKISEWGKIKECPIPQFAGNPPMTWKWIVGPMFLYLCERLVRFWRSQQKVVITKV VTHPFKTIELQMKKKGFKMEVGQYIFVKCPKVSKLEWHPFTLTSAPEEDFFSIHIRIVGDWTEGLFNACGCDKQE FQDAWKLPKIAVDGPFGTASEDVFSYEVVMLVGAGIGVTPFASILKSVWYKYCNNATNLKLKKIYFYWLCRDTHA FEWFADLLQLLESQMQERNNAGFLSYNIYLTGWDESQANHFAVHHDEEKDVITGLKQKTLYGRPNWDNEFKTIAS QHPNTRIGVFLCGPEALAETLSKQSISNSESGPRGVHFIFNKENF

AAAACACCAAATGGCGGATGACGCCGGTGCAGCGAGGAGGTCCGGAGGCCCTGGTGGCCCTGGGATGGGGAACC
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CCTACAGCTACCTGACCCCCGACCTCTGGAAGGAGACTGTATTTACCAAGTCTCCCTATCAGGAATTCACTGACC
ACCTCGTCAAGACCCACACCAGAGTCTCCCGTGCAGCGGACTCAGGCTCCAGCTGTGGCTACAACATAGGGTTTTT
ACACAAGAAAAATAAAGTGAATTAAGCGTG

MPVTKLGRLVKDMKIKSLEEIYLFSLPIKESEIIDFCLGASLKDEVLKIMPVQKQIRAGQRTRFKAFVAIGDYNG HVGLGVKCSKEVATAIRGAIILAKLSIVPVRRGYWRNKIGKPHTVPCKVTGRCGSVLVRLIPAPRGTGIVSAPVP KKLLMMAGIDDCYTSARGCTATLGNFAKATFDAISKTYSYLTPDLWKETVFTKSPYQEFTDHLVKTHTRVSVQRT QAPAVATT

GAACATCCAGTCATGGATAAAAATGAGCTGGTTCAGAAGGCCAAACTGGCCGAGCAGGCTGAGCGATATGATGAC ATGGCAGCCTGCATGAAGTCTGTAACTGAGCAAGGAGCTGAATTATCCAATGAGGAGGAATCTTCTCTCAGTT GCTTATAAAAATGTTTTAGGAGCCCGTAGGTCATCTTGGAGGGTCGTCTCAAGTATTGAACAAAAGACGGAAGGT GCTGAGAAAAACAGCAGATGGCTCGAGAATACAGAGAGAAAGTTGATACGGAGCTAAGAGATATCTGCAATGAT GTACTGTTTCTTTTGGAAAAGTTCTTGATCCCCAGTGCTTCACAAGCAGAGAGCAAAGTCTTCTCTTTGAAAATG AAAGGAGATTACTACCATTACTTGGCAGAGGTTGCCACTGGTGATGACAAGAAAGGGATTGTGGATCAGTCACAA CTTAACTTCTCTGTGTTCTATTATGAGATTCTGAACTCCCCAGAGAAAGCCTGCTCTCTTGCAAAGACAGCTTTT GATGAAGCCATTGCTGAACTTGATACATTAATTGAAGAGTCATACAAAGACAGCATGCTAATAATGCAATTACTG AGAGACAACTTGACATTGTGGACATCAGATACCCAAGGAGACGAAGCTGAAGCAGGAGAAGGAGGAGAAAATTAA CCGGCCTTCCAACTTTTGTGTGCCTCATTCTAAAATTTACACAGTAGACCATTTGTCATCCATGCTGTCCCACAA AGTTTTTTATTTACGATTTATGACAGGTTTATGTTACTTCTATTTTGAATTTCTATGTTTCCCATGTGGTTTTCAT GTTTAATATTAGGGGAGTAGAGCCAGTTAACATTTAGGGAGTTACCTGTTTTCATCTTGAGGTGGCCAATATGGG GATGTGGAATTTTTATACAAGTTATAAATGTTTGGCATAGTACTTTTGGTACATTGTGGCTTCACAAGGGCCAGG GTAAAACTGCTTCCCTGTCCAAGCAAAGAAAACTGCCTACATATTGGTTTGTCCTGGTGGGGAATAAAAGGGATC ATTGGTTCCAGTCACAGGTGTAGTAATTGTGGGTACTTTAAGGTTTGGAGCACTTACAAGGCTGTGGTAGAAACA TACCCCATGGATACCACATATTAAACCATGTATATCTGTGGAATACTCAATCTCAATGTGCACACCTTTGACTAC AACTGCAGAAGTGTTCCTTTAGACAAAGTTGTGACCCATTTTACTCTGGATAAGGGCAGAAACGGTTCACATTCC ATTATTTGTAAAGTTACCTGCTGTTAGCTTTCATTATTTTTGCTACACTCATTTTATTTGTATCTAAATGTTTTA GGCAACCTAAGAACAAATGTAAAAGTAAAGATGCAGGAAAAATGAATTGCTTGGTATTCATTACTTCATCTGTAT TTGATACTTGCCTAACATGCATGTGCTGTATAACAATCCAAGCATAATTGTTAAGAACACATGTATTAAATTCAT GTAAGTGGAATAAAAGTTTTATGAATGGACTTTTCAACTACTTTCTCTACAGCTTTTCATGTAAATTAGTCTTTT GGTTCTGAAACTTCTCTAAAGGAAATTGTACATTTTTTGAAATTTATTCCTTATTCCCTCTTGGCAGCTAATGGG AAAAATGTAATATGTTCCATTTAAAATTTTGGCGTATGGCATTTTCTAACTTAGGAAGCCACAATGTTCTTGGCC CGTCATGACATTGGGTAGCATTAACTATAAGTTTTGTGCTTCCAAATCACTTTTTGGTTTTTAAGAATTTCTTGA CCTTCTGTCTTGTCACCAACCATTCCTACTTGGTGGCCATGTACTTGGAAAAAAGGCCGCATGACCTTTCTGGCTC CACTCAGTGTCTAAGGCACCCTGCTTCCTTTGCTTGCATCCCACAGACTATTTCCCTCATCCTATTTACTGCAGC **AAATCTCTCCTTAGTTGATGAGATTGTGTTTATCTCCCTTTAAAACCCTGCCTATCCTGAATGGTTTGTCATTGT** CTGCCTTTAAAATCCTTCCTCTTTTCTTCCTCCTCTGTTCTCTAAATAATGATGGGGGCTAAGTTATACCCAAAGCT TTCTTTTAGAATGTAAGCTCCTCAAGAGCAGGGACAATGTTTTCTGTATGTTCTGTTGTGCCTAGTACACTGTAA ATGCTCAATAAATATTGATGATGGGAGGCA

AGCTGACACAACCAAGACGAGTCTCAGTGTCTAGGGAAGCTTGGGGTTCTGCTCCTTTTACTTCAGGCGAACCTG AACTTTAATGCAATTTTGAAGCATGCCCTGAATAGATTCAGTCATTATCAAGTCAAACTAAAAACGGTGAAAGGT TTACTCCTCCCACAGAATGCGCTTTATAACCAATCATAGCGACCAACCGCCACAAAACTTCTCAGCAACACCAAAA TGTTACTACCTGTCCCATGGATGAAAAATTGCTATCTACTGTGTTAACCACATCCTACTCTGTTATTTTCATCGT GGGACTGGTTGGGAACATAATCGCCCTCTATGTATTTCTGGGTATTCACCGTAAAAGAAATTCCATTCAAATTTA TCTACTTAACGTAGCCATTGCAGACCTCCTACTCATCTTCTGCCTCCCTTTCCGAATAATGTATCATATTAACCA AAACAAGTGGACACTAGGTGTGATTCTGTGCAAGGTTGTGGGAACACTGTTTTATATGAACATGTACATTAGCAT TATTTTGCTTGGATTCATCAGTTTTGGATCGCTATATAAAAATTAATCGGTCTATACAGCAACGGAAGGCAATAAC AACACTTAAGAAAGGAGGGCATAATTCCACAATGTGTTTCCATTACAGAGATAAGCATAACGCAAAAGGAGAAGC CATTTTTAACTTCATTCTTGTGGTAATGTTCTGGCTAATTTTCTTACTAATAATCCTTTCATATATTAAGATTGG GAAGAATCTATTGAGGATTTCTAAAAGGAGGTCAAAATTTCCTAATTCTGGTAAATATGCCACTACAGCTCGTAA CTCCTTTATTGTACTTATCATTTTTACTATATGTTTTGTTCCCTATCATGCCTTTCGATTCATCTACATTTCTTC ACAGCTAAATGTATCATCTTGCTACTGGAAAGAAATTGTTCACAAAACCAATGAGATCATGCTGGTTCTCTCATC TTTCAATAGTTGCTTAGATCCAGTCATGTATTTCCTGATGTCCAGTAACATTCGCAAAATAATGTGCCAACTTCT TTTTAGACGATTTCAAGGTGAACCAAGTAGGAGTGAAAGCACTTCAGAATTTAAACCAGGATACTCCCTGCATGA TACATCTGTGGCAGTGAAAATACAGTCTAGTTCTAAAAGTACT<u>TGA</u>GGTAAACATACTAAAATGAATTATAAAT GCAGCCTCTTAATTCTTTGAAGAACTAAAAAATTAGGAAACAAGTTCTAGCATTTACAAAACTCAGATCTCAAAG CTCTGCTTGTATTTGTGATATTTCATTTGCTTAACTGTAAACCATTTCAAGGTACTATCTTTTAAATCTGTATGT AAAATCTTTTCAAAATACATTTTTAAGCTAATACTCTTAACATAGATTATGAAGTTAAGTGAAATTTATGGCTCT AACAGCAAAATAATTAAAGTGCCATAGTTTCTCAAGTGACTAAAGTAGTTATTAAAATCAAGCACTTGATACTAA TTTGAAGTGTGTTTAAAAGTAAATGATTTGGGAACTGACAATGTGTCAGAAAATATATGTTCATTTATCATTTTA

 $\label{thm:timits} $$\operatorname{MRSHTITMTTSVSSWPYSSHRMFITNHSDQPPQNFSATPNVTTCPMDEKLLSTVLTTSYSVIFIVGLVGNIIA$$ LYVFLGIHRKRNSIQIYLLNVAIADLLLIFCLPFRIMYHINQNKWTLGVILCKVVGTLFYMNMYISIILLGFISL DRYIKINRSIQQRKAITTKQSIYVCCIVWMLALGGFLTMIILTLKKGGHNSTMCFHYRDKHNAKGEAIFNFILVV MFWLIFLLIILSYIKIGKNLLRISKRRSKFPNSGKYATTARNSFIVLIIFTICFVPYHAFRFIYISSQLNVSSCY WKEIVHKTNEIMLVLSSFNSCLDPVMYFLMSSNIRKIMCQLLFRRFQGEPSRSESTSEFKPGYSLHDTSVAVKIQ SSSKST $$$

 ${\tt MSGALDVLQMKEEDVLKFHAAGTHLGGTNLDFQMEQYIYKRKSDGIYIINLKRTWEKFLLAARAVVAIENPADVS} \\ {\tt VISSGNTGQRAVLKFAAATGATPIAGHFTPGTFTNQIQAAFREPRLLVVTDPRADHQPLTESSYVNLPTIALCNTDSPLRYVDIATTRELTQWV} \\$

 $\tt CTGCAGAGACTTCCCAGGAAGGTCCAGCGCCCTCTCAGCCTTCGTACTCAGAACAGCCG{\color{red} \underline{ATG}} \\ \tt ATGGGCCTCAGTA$ ACCTGAGCCCCGGTCCTGGCCCAGCCAGCCGTGCCTCTCCCAGAGGGGCTGCTCCGCCAGCGGTACAGAGAGG AGAAGACCCTGGAAGAGCGGCGGTGGGAGAGGCTGGAGTTCCTTCAGAGGAAGAAAGCATTCCTGCGGCATGTGA GTCAGAATCGATTCCGATGTGAATGTCGATACTGCCAGAGCCACAGGCCGAATCTTTCTGGGATCCCTGGGGAGA GTAACAGGGCCCCACATCCCTCCTGGGAGACGCTGGTGCAGGGCCTCAGTGGCTTGACTCTCAGCCTAGGCA AGCAGGAGAGCAAAATAATGTTTCAGAGGCTGCTCAAGCAGTGGTTAGAGGAAAAC<u>TGA</u>GACGTGCACCCCCATG GGATGGAGACCCGAAGGGACTCAGACGGAGCCGCCGTGTTGGCAGCGCCTGGGTGTGGGCCCATTTTGGGGACCA AACAGCAAGCTGTGGTCGGATGAGTGCCAGGACCTGTGTACCGGGACACGTGGGAGTCCTCCCAGCATGATGCTT GACTGACCCGAGGAAGGTCCTCATGTTTCGTGCCTGTCATTCTCGGATGGCTGTGAGGCATTCCTTGGCAAGGGA CGCTGCGTACCAGCGGTCCTCACCGCATCTCACATGGCTCCTGTGATGCATGTTGTCGCTTTCCCACCCGGGATC TCCATCTCTCTCCCTCCTGCTGTCAGTAAGAGATCACATGTCTGTGTAGTGTGAATGCCTTGTCGCTGTCCTG TGCTTTTGCACCATTGAGTTGACTGCCTCTGAGAAGCAGCACTAGGCCTGTTGAAATGCAATGTGCTGCCCTGAG ATCCAGTTTCAAGAATGGGCAGGTAAACGCAGTGTGGGAAAGGAATGTGGAATGAGAACTTGGTGGTTCACCGCT

MMGLSNLSPGPGPSQAVPLPEGLLRQRYREEKTLEERRWERLEFLQRKKAFLRHVRRRHRDHMAPYAVGREARIS PLGDRSQNRFRCECRYCQSHRPNLSGIPGESNRAPHPSSWETLVQGLSGLTLSLGTNQPGPLPEAALQPQETEEK RQRERQQESKIMFQRLLKQWLEEN

WO 2004/030615 PCT/US2003/028547

6677/6881 FIGURE 6165

GGCACGAGGGTGGTCGGAGCGCCGACTCCCTTCTCGTCGTCGCCATTTTGAGCTGGTGACTGTGGCCGGCTGGGA CGGACTTGGTTGTTGCGCGCTCCGGCTCCGGCTGAGCTGGGAGAGTTGGAGGAGGTGGCGGCGGGCAGAGGTGAT GTCTGGGAGCCCTTCCTTGACAGCCCGGGCCGAGAAGAGTCCCTGCAGGAAGCATCACCCAGGCTGGCAGATCAT GGTAGCAGCAGCGGGGTGGCTGGGAAGTGAAACGGAGCCAGCGGCTGAGGAGGGGCCCCAGCAGCCCCCGAAGG CCCTATCAGGACATGGAGTATGAAAGACGTGGTGGTCGTGGTGACAGGACTGGCCGCTATGGAGCCACTGACCGC TCGCAGGATGATGGTGGGGAGAACCGCAGCCGAGACCACGACTACCGGGACATGGACTACCGTTCATATCCTCGC GAGTATGGCAGCCAGGAGGCCAAGCATGACTATGACGACTCATCTGAGGAGCAGAGTGCGGAGGATTCCTACGAG GCCTCCCGGGCTCCGAGACTCAGCGTAGGCGGCGGCGGCACAGGCACAGCCCCACCGGCCCAGGCTTC GAGGAGGAGGAGAAGGCCAGTAACATCGTCATGCTGAGGATGCTGCCACAGGCAGCCACTGAGGATGACATCCGT GGCCAGCTGCAGTCGCACGGCGTGCAAGCACGGGAGGTTCGGCTGATGCGGAACAAATCTTCAGGTCAGAGCCGG ATCCTGGGCCAGAAGGTGTCGATGCACTACAGTGACCCCAAGCCCAAGATCAATGAGGACTGGCTGTGCAATAAG TGTGGCGTCCAGAACTTCAAACGCCGAGAGAAGTGCTTCAAATGTGGCGTGCCCAAGTCAGAGGCAGAGCAGAAG CTGCCCTCGGCACGAGGCTGGATCAGCAGACACTGCCACTGGGTGGCCGGGAGCTGAGCCAGGGCCTGCTTCCC CTGCCGCAGCCCTACCAGGCCCAGGGAGTCCTGGCCTCCCAAGCCCTGTCACAGGGCTCGGAGCCAAGCTCAGAG CCCTACGCGGTGCTCTCCTCCAACGTGCGCGTCATAAAGGACAAGCAGACCCAACTGAACCGCGGCTTTGCC ATCGACGCAAGACCATCAATGTTGAGTTTGCCAAGGGTTCTAAGAGGGACATGGCCTCCAATGAAGGCAGTCGC ATCAGTGCTGCCTCTGTGGCCAGCACTGCCATTGCTGCGGCCCAGTGGGCCATCTCACAGGCCTCCCAAGGTGGG GAGGGTACCTGGGCCACCTCCGAGGAGCCGCCGGTCGACTACAGCTACTACCAACAGGATGAGGGCTATGGCAAC AGCCAGGGCACAGAGTCTTCCCTCTATGCCCATGGCTACCTCAAGGGCACCAAGGGCCCTGGCATCACTGGAACC AAAGGGGATCCCACTGGAGCAGGTCCCGAGGCCTCCCTAGAGCCTGGGGCCGACTCTGTGTCGATGCAGGCTTTC TCTCGCGCCCAGCCTGGTGCTGCTCCTGGCATCTACCAACAATCAGCCGAGGCGAGCAGTAGCCAGGGCACTGCT GCCAACAGCCAGTCGTATACCATCATGTCACCCGCTGTGCTCAAATCTGAGCTCCAGAGCCCTACCCATCCTAGT TCTGCTCTCCCACCGGCTACCAGCCCCACTGCCCAGGAATCCTACAGCCAGTACCCTGTTCCCGACGTCTCTACC TACCAGTACGATGAGACCTCCGGCTACTACTATGACCCCCAGACCGGCCTCTACTATGACCCCAACTCCCAGTAT TACTACAATGCTCAGAGCCAGCAGTACCTGTACTGGGATGGGGAGAGGCGGACCTATGTTCCCGCCCTGGAGCAG TCGGCCGACGGACATAAGGAGACAGGGGCACCCTCGAAGGAGGGCAAAGAGAAGAAGAAGAAGAAGAACAAGACCAAG AGCTTCCAGCCTATCAGCTCCCTGCGAGATGACGAGAGGCGGGAGTCAGCCACTGCAGATGCTGGCTATGCCATC CTCGAGAAGAGGGAGCACTAGCCGAGAGACAGCACCAGCATGGATCTCCCGAAATTGGCCAGTGACGACCGC CCAAGCCCTCCGCGAGGACTGGTGGCAGCCTACAGCGGGGAGAGTGACAGTGAGGAGGAGCAGGAGCGTGGGGGC CCTGAGCGGGAGGAGAGCTCACCGACTGGCAGAAGCTGGCCTGTCTGCCGACGCCAGTTCCCCAGCAAA GAGGCGCTCATCCGGCACCAGCAGCTCTCAGGGCTCCACAAGCAAAACCTTGAGATTCACCGGCGAGCCCACTTG TCAGAAAACGAGCTAGAAGCACTAGAGAAGAATGACATGGAGCAAATGAAGTACCGGGACCGTGCAGCTGAACGC AGAGAAAAGTATGGCATCCCCGAGCCGCCAGAGCCCAAGAGGAGGAAGTACGGCGGCATATCCACAGCCTCTGTA GACTTCGAGCAGCCTACTCGGGACGGGCTGGGCAGTGACAACATTGGCAGTCGGATGCTGCAGGCCATGGGCTGG AAAGAGGCAGCGGCCTGGGCCGCAAGAAGCAGGCCATTGTAACGCCTATCGAGGCCCAAACACGGGTGCGGGGC TCCGGCCTGGGTGCACGGGGCAGCTCCTACGGGGTCACCTCAACCGAGTCCTACAAGGAGACACTGCACAAGACA ATGGTGACCGCTTCAACGAGGCCCAGTGAGCAGCTTCAAGAGCAACTTCTCCACATGTTGGGTGTCCATCCTGG AGGGCTTGACCAAATCAAATTGAGGTGGTGACTTTTGTTGGAAAATTGGGCTGGGATCACGTCCTGTTTTGTAAT

MEYERRGGRGDRTGRYGATDRSQDDGGENRSRDHDYRDMDYRSYPREYGSQEGKHDYDDSSEEQSAEDSYEASPG
SETQRRRRRHRHSPTGPPGFPRDGDYRDQDYRTEQGEEEEEEEDEEEEEKASNIVMLRMLPQAATEDDIRGQLQ
SHGVQAREVRLMRNKSSGQSRGFAFVEFSHLQDATRWMEANQHSLNILGQKVSMHYSDPKPKINEDWLCNKCGVQ
NFKRREKCFKCGVPKSEAEQKLPLGTRLDQQTLPLGGRELSQGLLPLPQPYQAQGVLASQALSQGSEPSSENAND
TIILRNLNPHSTMDSILGALAPYAVLSSSNVRVIKDKQTQLNRGFAFIQLSTIVEAAQLLQILQALHPPLTIDGK
TINVEFAKGSKRDMASNEGSRISAASVASTAIAAAQWAISQASQGGEGTWATSEEPPVDYSYYQQDEGYGNSQGT
ESSLYAHGYLKGTKGPGITGTKGDPTGAGPEASLEPGADSVSMQAFSRAQPGAAPGIYQQSAEASSSQGTAANSQ
SYTIMSPAVLKSELQSPTHPSSALPPATSPTAQESYSQYPVPDVSTYQYDETSGYYYDPQTGLYYDPNSQYYYNA
QSQQYLYWDGERRTYVPALEQSADGHKETGAPSKEGKEKKEKHKTKTAQQIAKDMERWARSLNKQKENFKNSFQP
ISSLRDDERRESATADAGYAILEKKGALAERQHTSMDLPKLASDDRPSPPRGLVAAYSGESDSEEEQERGGPERE
EKLTDWQKLACLLCRRQFPSKEALIRHQQLSGLHKQNLEIHRRAHLSENELEALEKNDMEQMKYRDRAAERREKY
GIPEPPEPKRRKYGGISTASVDFEQPTRDGLGSDNIGSRMLQAMGWKEGSGLGRKKQGIVTPIEAQTRVRGSGLG
ARGSSYGVTSTESYKETLHKTMVTRFNEAQ

TGGCGGCGCGCGCACCCGGGGAACCGGCATTG<u>ATG</u>TCCAGCTCGCCGCTGTCCAAGAAACGTCGCGTGTCCGGGC GAATGCCCAAGAACGGCAGTGAAGCAGACATAGACGAGGGCCTTTACTCCCGGCAGCTGTATGTTTGGGCCATG-AGGCAATGAAGCGGCTCCAGACATCCAGTGTCCTGGTATCAGGCCTGCGGGGCCTGGGCGTGGAGATCGCTAAGA ACATCATCCTTGGTGGGGTCAAGGCTGTTACCCTACATGACCAGGGCACTGCCCAGTGGGCTGATCTTTCCTCCC AGTTCTACCTGCGGGAGGACATCGGTAAAAACCGGGCCGAGGTATCACAGCCCCGCCTCGCTGAGCTCAACA GCTATGTGCCTGTCACTGCCTACACTGGACCCCTCGTTGAGGACTTCCTTAGTGGTTTCCAGGTGGTGGTGCTCA CCAACACCCCCTGGAGGACCAGCTGCGAGTGGGTGAGTTCTGTCACAACCGTGGCATCAAGCTGGTGGTGGCAG GCACGCGGGGCCTGTTTGGGCAGCTCTTCTGTGACTTTGGAGAGGAAATGATCCTCACAGATTCCAATGGGGAGC ACGGGTTTGAGAGCGGGGACTTTGTCTCCTTTTCAGAAGTACAGGGCATGGTTGAACTCAACGGAAATCAGCCCA TGGAGATCAAAGTCCTGGGTCCTTATACCTTTAGCATCTGTGACACCTCCAACTTCTCCGACTACATCCGTGGAG GCATCGTCAGTCAGGTCAAAGTACCTAAGAAGATTAGCTTTAAATCCTTGGTGGCCTCACTGGCAGAACCTGACT TTGTGGTGACGGACTTCGCCAAGTTTTCTCGCCCTGCCCAGCTGCACATTGGCTTCCAGGCCCTGCACCAGTTCT GTGCTCAGCATGGCCGGCCACCTCGGCCCCGCAATGAGGAGGATGCAGCAGAACTGGTAGCCTTAGCACAGGCTG TGAATGCTCGAGCCCTGCCAGCAGTGCAGCAAAATAACCTGGACGAGGACCTCATCCGGAAGCTGGCATATGTGG $\tt CTGCTGGGGATCTGGCACCCATAAACGCCTTCATTGGGGGCCTGCCCAGGAAGTCATGAAGGCCTGCTCCG$ GGAAGTTCATGCCCATCATGCAGTGGCTATACTTTGATGCCCTTGAGTGTCTCCCTCAGGACAAAGAGGTCCTCA CAGAGGACAAGTGCCTCCAGCGCCAGAACCGTTATGACGGGCAAGTGGCTGTGTTTGGCTCAGACCTGCAAGAGA AGCTGGGCAAGCAGAAGTATTTCCTGGTGGGTGCGGGGGCCATTGGCTGTGAGCTGCTCAAGAACTTTGCCATGA GACAGTTTCTTTCCGGCCCTGGGATGTCACGAAGTTAAAGTCTGACACGGCTGCTGCAGCTGTGCGCCAAATGA ATCCACATATCCGGGTGACAAGCCACCAGAACCGTGTGGGTCCTGACACGGAGCGCATCTATGATGACGATTTTT TCCAAAACCTAGATGGCGTGGCCAATGCCCTGGACAACGTGGATGCCCGCATGTACATGGACCGCCGCTGTGTCT ACTACCGGAAGCCACTGCTGGAGTCAGGCACACTGGGCACCAAAGGCAATGTGCAGGTGGTGATCCCCTTCCTGA CAGAGTCGTACAGTTCCAGCCAGGACCCACCTGAGAAGTCCATCCCCATCTGTACCCTGAAGAACTTCCCTAATG CCATCGAGCACACCCTGCAGTGGGCTCGGGATGAGTTTGAAGGCCTCTTCAAGCAGCAGCAGAAAATGTCAACC CTGTGCAGCCCAGCCTGGTGCTGCAGCGACCACAGACCTGGGCTGACTGCGTGACCTGGGCCTGCCACCACTGGC ACACCCAGTACTCGAACAACATCCGGCAGCTGCTGCACAACTTCCCTCCTGACCAGCTCACAAGCTCAGGAGCGC CGTTCTGGTCTGGGCCCAAACGCTGTCCACACCCGCTCACCTTTGATGTCAACAATCCCCTGCATCTGGACTATG TGATGGCTGCTGCCAACCTGTTTGCCCAGACCTACGGGCTGACAGGCTCTCAGGACCGAGCTGCTGTGGCCACAT TCCTGCAGTCTGTGCAGGTCCCCGAATTCACCCCCAAGTCTGGCGTCAAGATCCATGTTTCTGACCAGGAGCTGC AGAGCGCCAATGCCTCTGTTGATGACAGTCGTCTAGAGGAGCTCAAAGCCACTCTGCCCAGCCCAGACAAGCTCC CTGGATTCAAGATGTACCCCATTGACTTTGAGAAGGATGATGACAGCAACTTTCATATGGATTTCATCGTGGCTG CATCCAACCTCCGGGCAGAAAACTATGACATTCCTTCTGCAGACCGGCACAAGAGCAAGCTGATTGCAGGGAAGA TCATCCCAGCCATTGCCACGACCACAGCAGCCGTGGTTGGCCTTGTGTGTCTGGAGCTGTACAAGGTTGTGCAGG TTGCCGCACCACGTCACCAGTACTATAACCAAGAGTGGACATTGTGGGATCGCTTTGAGGTACAAGGGCTGCAGC CTAATGGTGAGGAGATGACCCTCAAACAGTTCCTCGACTATTTTAAGACAGAGCACAAATTAGAGATCACCATGC TGTCCCAGGGCGTGTCCATGCTCTATTCCTTCTTCATGCCAGCTGCCAAGCTCAAGGAACGGTTGGATCAGCCGA TGACAGAGATTGTGAGCCGTGTGTCGAAGCGAAAGCTGGGCCGCCACGTGCGGGCGCTGGTGCTTGAGCTGTGCT GTAACGACGAGAGCGGCGAGGATGTCGAGGTTCCCTATGTCCGATACACCATCCGC<u>TGA</u>CCCCGTCTGCTCCTCT AGGCTGGCCCTTGTCCACCCCTCTCCACACCCCTTCCAGCCCAGGGTTCCCATTTGGCTTCTGGCAGTGGCCCA ACTAGCCAAGTCTGGTGTTCCCTCATCATCCCCCTACCTGAACCCCTCTTGCCACTGCCTTCTACCTTGTTTGAA

FIGURE 6168

MSSSPLSKKRRVSGPDPKPGSNCSPAQSVLSEVPSVPTNGMAKNGSEADIDEGLYSRQLYVLGHEAMKRLQTSSV
LVSGLRGLGVEIAKNIILGGVKAVTLHDQGTAQWADLSSQFYLREEDIGKNRAEVSQPRLAELNSYVPVTAYTGP
LVEDFLSGFQVVVLTNTPLEDQLRVGEFCHNRGIKLVVAGTRGLFGQLFCDFGEEMILTDSNGEQPLSAMVSMVT
KDNPGVVTCLDEARHGFESGDFVSFSEVQGMVELNGNQPMEIKVLGPYTFSICDTSNFSDYIRGGIVSQVKVPKK
ISFKSLVASLAEPDFVVTDFAKFSRPAQLHIGFQALHQFCAQHGRPPRRNEEDAAELVALAQAVNARALPAVQQ
NNLDEDLIRKLAYVAAGDLAPINAFIGGLAAQEVMKACSGKFMPIMQWLYFDALECLPQDKEVLTEDKCLQRQNR
YDGQVAVFGSDLQEKLGKQKYFLVGAGAIGCELLKNFAMIGLGCGEGGEIIVTDMDTIEKSNLNRQFLFRPWDVT
KLKSDTAAAAVRQMNPHIRVTSHQNRVGPDTERIYDDDFFQNLDGVANALDNVDARMYMDRRCVYYRKPLLESGT
LGTKGNVQVVIPFLTESYSSSQDPPEKSIPICTLKNFPNAIEHTLQWARDEFEGLFKQPAENVNQYLTDPKFVER
TLRLAGTQPLEVLEAVQRSLVLQRPQTWADCVTWACHHWHTQYSNNIRQLLHNFPPDQLTSSGAPFWSGPKRCPH
PLTFDVNNPLHLDYVMAAANLFAQTYGLTGSQDRAAVATFLQSVQVPEFTPKSGVKIHVSDQELQSANASVDDSR
LEELKATLPSPDKLPGFKMYPIDFEKDDDSNFHMDFIVAASNLRAENYDIPSADRHKSKLIAGKIIPAIATTTAA
VVGLVCLELYKVVQGHRQLDSYKNGFLNLALPFFGFSEPLAAPRHQYYNQEWTLWDRFEVQGLQPNGEEMTLKQF
LDYFKTEHKLEITMLSQGVSMLYSFFMPAAKLKERLDQPMTEIVSRVSKRKLGRHVRALVLELCCNDESGEDVEV

FIGURE 6169

CAGGCCTGGACAGCCAGTGGCGCCAGATAGAAAACGGCGAGAGTGGGCGAGAACGTCCACTGCGGGCCGAAA GCTGGTTCCTTGTGGAGAAGCACTGGTATAAGCAGTGGGAGGCATACGTGCAGGAGGGGACCAGGACTCCAGCA CCTTCCCTGGCTGCATCAACAATGCCACACTCTTTCAAGATGAGATAAACTGGCGCCTCAAGGAGGGACTGGTGG AAGGCGAGGATTATGTGCTGCTCCCAGCAGCTGCTTGGCATTACCTGGTCAGCTGGTATGGTCTAGAGCATGGCC AGCCACCCATTGAACGCAAGGTCATAGAGCTGCCCAACATCCAGAAGGTCGAAGTGTACCCAGTAGAACTGCTGC TTGTCCGGCACAATGATTTGGGCAAATCTCACACTGTTCAGTTCAGCCATACCGATTCTATTGGCCTAGTATTGC GCACAGCTCGGGAGCGGTTTCTGGTGGAGCCCCAGGAAGACACTCGGCTTTGGGCCAAGAACTCAGAAGGCTCTT TGGATAGGTTGTATGACACACACACCACCGGTTCTCGATGCGGCCCTTGAGACTGGGCAGTTGATCATCATGGAGA CCCGCAAGAAGATGGCACTTGGCCCAGCGCACAGCTGCATGTCATGAACAACATGTCGGAAGAGGATGAGG GCCTCAGCAATGTGCCACAGCTCACCGAGTACTTCCTCAACAACTGCTACCTGGAGGAGCTCAACTTCCGCAACC ${\tt CACTGGGCATGAAGGGTGAGATCGCAGAGGCCTATGCAGACCTGGTGAAGCAGGCGTGGTCTGGCCACCACCGCT}$ ${\tt CCATTGTGCCACATGTGTTCAAGAACAAGGTTGGCCATTTTGCATCCCAATTTCTGGGCTACCAGCAGCATGACT}$ CTCAGGAGCTGCTGTCATTCCTCCTGGACGGGCTGCATGAGGACCTTAATCGGGTGAAGAAGAAGGAGTATGTGG AGCTGTGCGATGCTGCGGGGGCGATCAGGAGGTGGCACAGGAGGCATGGCAAAACCACAAACGGCGGAACG ATTCTGTGATCGTGGACACTTTCCACGGCCTCTTCAAGTCCACGCTGGTGTGCCCCGATTGTGGCAATGTATCTG TGACCTTCGACCCCTTCTGCTACCTCAGTGTTCCACTGCCTATCAGCCACAAGAGGGTCTTGGAGGTCTTCTTTA TCCCCATGGATCCGCGCCGCAAGCCAGAGCAGCACCGGCTCGTGGTCCCCAAGAAAGGCAAGATCTCGGATCTAT GTGTGGCTCTGTCCAAACACACGGGCATCTCGCCAGAGAGGATGATGGTGGCTGATGTCTTCAGTCACCGCTTCT ATAAGCTCTATCAGCTAGAGGAGCCTCTGAGCAGCATCTTGGACCGTGATGATATCTTCGTCTATGAGGTGTCAG GTCGCATTGAGGCCATTGAGGGCTCAAGAGAGGACATCGTGGTTCCTGTCTACCTGCGGGAGCGCACCCCTGCCC GTGACTACAACAACTCCTACTACGGCCTGATGCTTTTTGGACACCCCCTCCTGGTATCAGTGCCCCGGGACCGCT TCACCTGGGAGGGCCTGTATAACGTCCTGATGTACCGGCTCTCACGCTACGTGACCAAACCCAACTCAGATGATG AGGACGATGGGGATGAGAAGAAGATGACGAGGAGGATAAAGATGACGTCCCTGGGCCCTCAACTGGGGGCAGCC TCCGAGACCCTGAGCCAGAGCAGGCTGGGCCCAGCTCTGGAGTCACGAACAGGTGCCCGTTCCTCGGACAATT GCCTTGGCACATCTCAGTGGCCCCCAAGGCGACGCAGCAGCAGCTGTTCACCCTGCAGACGGTGAACTCCAATG GGACCAGCGACCGCACAACCTCCCCTGAAGAAGTCCATGCCCAGCCGTACATTGCTATCGACTGGGAGCCAGAGA TGAAGAAGCGTTACTATGACGAGGTAGAGGCTGAGGGCTACGTGAAGCATGACTGCGTCGGGTACGTGATGAAGA AGGCTCCCGTGCGGCTGCAGGAGTGCATTGAGCTCTTCACCACTGTGGAGACCCTGGAGAAGGAAAACCCCTGGT ACTGCCCTTCCTGCAAGCAGCACCAGCTGGCAACCAAGAAGCTGGACCTGTGGATGCTGCCGGAGATTCTCATCA TCCACCTGAAACGCTTTTCCTACACCAAGTTCTCCCGAGAGAAGCTGGACACCCTCGTGGAGTTTCCTATCCGGG ACCTGGACTTCTCTGAGTTTGTCATCCAGCCACAGAATGAGTCGAATCCGGAGCTGTACAAATATGACCTCATCG GGCACTACTTTGATGACAACAGCGTCTCCCCTGTCAATGAGAATCAGATCGAGTCCAAGGCAGCCTATGTCCTCT AAAGCCCTCTCTGCAATCTCGCTTCTCGTGTCCGCCCCGCTTCTCTTATTCGTGTTAGGTGCCCCCGCCAGGCAT TGCAGGCTTAGTCGTGGCTACTGTTCTCCTGTGCCGCTGCATCGCTCTCTCCCGGGAAAGAACAGGTCGTGTCTC TGCCCTTCCCTCAGCCCAGAGTGTTCTGCGTGGGTGATGGGGGGTTCACCTGAACACAGAGTGTATTT

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6682/6881 FIGURE 6170

TGACCCAATAAGGGTGGAAGGCTGAGTCCCGCAGAGCCAATAACGAGAGTCCGAGAGGCGACGGAGGCGGACTCT GTGAGGAAACAAGAAGAGGGCCCAAGATGGAGACGGCGGCGGCTGTAGCGGCGTGACAGTGAAGCTGAGACCTT GGCACTCAAGAGTGAGACAAGCAACAGGAGGGCCTGAGCAGAGAAGGAACTGGAAGGACTTCAGATGTGAGCAGG ATCTCTTGGACTGTCGTGTGAAAATTAGGCTGCAGGGGGGCGACAGGAGCCTGGACTTTGAATTTTATTTTGTCCC CTGCCACTTTGCTTCTAGACTATCATTATTGGACCTCTGAATTCTTGTCTGCCTTCTTGTAGGAGCCCCATGGCA CCTGCCCAGCCCACCTCAGCCCATCTTGACAAAATCTAAGGCTCC<u>ATC</u>GAGCCACCACGGGGCCCCCCTGCCAA TGGGGCCGAGCCATCCCGGGCAGTGGGCACCGTCAAAGTATACCTGCCCAACAAGCAACGCACGGTGGTGACTGT CCGGGATGGCATGAGTGTCTACGACTCTCTAGACAAGGCCCTGAAGGTGCGGGGTCTAAATCAGGACTGCTGTGT GGTCTACCGACTCATCAAGGGACGAAAGACGGTCACTGCCTGGGACACAGCCATTGCTCCCCTGGATGGCGAGGA GCTCATTGTCGAGGTCCTTGAAGATGTCCCGCTGACCATGCACAATTTTGTACGGAAGACCTTCTTCAGCCTGGC GTTCTGTGACTTCTGCCTTAAGTTTCTGTTCCATGGCTTCCGTTGCCAAACCTGTGGCTACAAGTTCCACCAGCA TTGTTCCTCCAAGGTCCCCACAGTCTGTGTTGACATGAGTACCAACCGCCAACAGCCCTCAAGGTTCTACCACAG TGTCCAGGATTTGTCCGGAGGCTCCAGACAGCATGAGGCTCCCTCGAACCGCCCCTGAATGAGTTGCTAACCCC CCAGGGTCCCAGCCCCGCACCCAGCACTGTGACCCGGAGCACTTCCCCTTCCCTGCCCCAGCCAATGCCCCCCT ACAGCGCATCCGCTCCACGTCCAACGTCCATATGGTCAGCACCACGGCCCCCATGGACTCCAACCTCAT CCCCAGCCCAGCCAGCGTGTCCTCGGGGAGGAAGTCCCCACATTCCAAGTCACCAGCAGAGCAGCGGAGCGGAA GTCCTTGGCCGATGACAAGAAGTGAAGAACCTGGGGTACCGGGACTCAGGCTATTACTGGGAGGTACCACC CAGTGAGGTGCAGCTGCTGAAGAGGATCGGGACGGCTCGTTTGGCACCGTGTTTCGAGGGCGGTGGCATGGCGA TGTGGCCGTGAAGGTGCCCAAGGTGTCCCAGCCCACAGCTGAGCAGGCCCAGGCTTTCAAGAATGAGATGCAGGT ACAGTGGTGTGAGGGCTCCAGCCTCTACCATCACCTGCATGTGGCCGACACACGCTTCGACATGGTCCAGCTCAT CGACGTGGCCCGGCAGACTGCCCAGGGCATGGACTACCTCCATGCCAAGAACATCATCCACCGAGATCTCAAGTC TAACAACATCTTCCTACATGAGGGGCTCACGGTGAAGATCGGTGACTTTGGCTTGGCCACAGTGAAGACTCGATG GAGCGGGCCCAGCCCTTGGAGCAGCCCTCAGGATCTGTGCTGTGGATGGCAGCTGAGGTGATCCGTATGCAGGA CCCGAACCCCTACAGCTTCCAGTCAGACGTCTATGCCTACGGGGTTGTGCTCTACGAGCTTATGACTGGCTCACT GCCTTACAGCCACATTGGCTGCCGTGACCAGATTATCTTTATGGTGGGCCGTGGCTATCTGTCCCCGGACCTCAG CAAAATCTCCAGCAACTGCCCCAAGGCCATGCGGCGCCTGCTGTCTGACTGCCTCAAGTTCCAGCGGGAGGAGCG GCCCCTCTTCCCCCAGATCCTGGCCACAATTGAGCTGCTGCAACGGTCACTCCCCAAGATTGAGCGGAGTGCCTC TCGTCTCTGCCCTGATGCTCCCCAGGATCCCCCATTCCCCACCCTGGGAGATGAGGGGGGTCCCCATGTGCTTTT CCAGTTCTTCTGGAATTGGGGGACCCCCGCCAAAGACTGAGCCCCCTGTCTCCTCCATCATTTGGTTTCCTCTTG GCTTTGGGGATACTTCTAAATTTTGGGAGCTCCTCCATCTCCAATGGCTGGGATTTGTGGCAGGGATTCCACTCA GAACCTCTCTGGAATTTGTGCCTGATGTGCCTTCCACTGGATTTTGGGGTTCCCAGCACCCCATGTGGATTTTGG

MEPPRGPPANGAEPSRAVGTVKVYLPNKQRTVVTVRDGMSVYDSLDKALKVRGLNQDCCVVYRLIKGRKTVTAWD TAIAPLDGEELIVEVLEDVPLTMHNFVRKTFFSLAFCDFCLKFLFHGFRCQTCGYKFHQHCSSKVPTVCVDMSTN RQQPSRFYHSVQDLSGGSRQHEAPSNRPLNELLTPQGPSPRTQHCDPEHFPFPAPANAPLQRIRSTSTPNVHMVS TTAPMDSNLIQLTGQSFSTDAAGSRGGSDGTPRGSPSPASVSSGRKSPHSKSPAEQRERKSLADDKKKVKNLGYR DSGYYWEVPPSEVQLLKRIGTGSFGTVFRGRWHGDVAVKVLKVSQPTAEQAQAFKNEMQVLRKTRHVNILLFMGF MTRPGFAIITQWCEGSSLYHHLHVADTRFDMVQLIDVARQTAQGMDYLHAKNIIHRDLKSNNIFLHEGLTVKIGD FGLATVKTRWSGAQPLEQPSGSVLWMAAEVIRMQDPNPYSFQSDVYAYGVVLYELMTGSLPYSHIGCRDQIIFMV GRGYLSPDLSKISSNCPKAMRRLLSDCLKFQREERPLFPQILATIELLQRSLPKIERSASEPSLHRTQADELPAC LLSAARLVP

ACATTGGGCTCCTCCTCGGGCCCACGTGAGCTGTAGGGAAACGCAGGGGCGGCTTCTAGGTGCTGCCGCCGC CCCCCGGAGCTGCCAACATTGCCAACGCCACGCCACGCTACACACAGGTACCCCTGGGATGGCGTGAGCACTC CCCCAGCGATGGACCCATCTGTGACGCTGTGGCAGTTTCTGCTGCAGCTGCTGAGAGAGCAAGGCAATGGCCACA TCATCTCCTGGACTTCACGGGATGGTGGAATTCAAGCTGGTGGATGCAGAGGAGGTGGCCCGGCTGTGGGGGC TACGCAAGAACAAGACCAACATGAATTACGACAAGCTCAGCCGGGCCTTGCGGTACTACTATGACAAGAACATCA TCCGCAAGGTGAGCGGCCAGAAGTTCGTCTACAAGTTTGTGTCCTACCCTGAGGTCGCAGGGTGCTCCACTGAGG ACTGCCCGCCCAGCCAGAGGTGTCTGTTACCTCCACCATGCCAAATGTGGCCCCTGCTGCTATACATGCCGCCC CAGGGGACACTGTCTCTGGAAAGCCAGGCACACCCAAGGGTGCAGGAATGGCAGGCCCAGGCGGTTTGGCACGCA GCAGCCGGAACGAGTACATGCGCTCGGGCCTCTATTCCACCTTCACCATCCAGTCTCTGCAGCCGCAGCCACCCC GCACCAGTCCAAGCCCCTTGGAGGCCTGTCTGGAGGCTGAAGAGGCCGGCTTGCCTCTGCAGGTCATCCTGACCC CGCCCGAGGCCCCAAACCTGAAATCGGAAGAGCTTAATGTGGAGCCGGGTTTGGGCCGGGCTTTGCCCCCAGAAG TGAAAGTAGAAGGCCCCAAGGAAGAGTTGGAAGTTGCGGGGGAGAGAGGGTTTGTGCCAGAAACCACCAAGGCCG AGCCAGAAGTCCCTCCACAGGAGGGCGTGCCAGCCCGGGCTGCCCGCGGTTGTTATGGACACCGCAGGGCAGGCGG GCGGCCATGCGGCTTCCAGCCCTGAGATCTCCCAGCCGCAGAAGGGCCGGAAGCCCCGGGACCTAGAGCTTCCAC TCAGCCCGAGCCTGCTAGGTGGGCCGGGACCCGAACGGACCCCAGGATCGGGAAGTGGCTCCGGCCTCCAGGCTC CGGGGCCGGCGCTGACCCCATCCCTGCTTCCTACGCATACATTGACCCCGGTGCTGCTGACACCCCAGCTCGCTGC CTCCTAGCATTCACTTCTGGAGCACCCTGAGTCCCATTGCGCCCCGTAGCCCGGCCAAGCTCTCCTTCCAGTTTC CATCCAGTGGCAGCGCCCAGGTGCACATCCCTTCTATCAGCGTGGATGGCCTCTCGACCCCCGTGGTGCTCTCCC AGCCAGCCATCTCAAGGAGAAACATAGTTCAACTGAAAGACTCATGCTCTGATTGTGGTGGGGGTGGGGATCCTTG GGAAGAATTACTCCCAAGAGTAACTCTCATTATCTCCTCCACAGAAAACACACAGCTTCCACAACTTCTCTGTTT GAAGGCCACTGGGAGGAGCCTGACCTTATTAGGGTGGTTAGGACATCTCCCCCACCTCCCCACTTTTTTCC CAGGGGTCCAGGAAGAATTTGTACCATTTAATGGGTTGGGAGTCTTGGCCAAGGAAGAATCACACCCTTGGAATA ${\tt CCCGCTGCCATTTTGATAGTATAATCTATTTTTAAATGGGGGCTTTTCAATAGGGGAGAGGGAGTCATCTCTTCCT}$ ATATTTGGTGGGGTGGGAAGGAAGGGATTTGGGGGGGAATCTTCCTGCCGCCTCCCCACTCCAAGTGTTT CCCTTTCAATGTCCCTGGAGTTGGGAGGGAGGAATGGGGGACATAAAGCCTGTCCTGTCTCTATTCTAGGCAAGA GAGAGTGGGTTCAAAAGACTCCTGGGCTCACCTGTTAGCGCTGGCCCAGCCCAGGCCTTGGGACCTGGGGGTTGG AGAGTCCCAGAGAATGGGGAATTGTTCCTGTAAATATATTTTTCAAAGTGA

 $\label{thm:compact} CGGAAGCCGCGGGTTCCTACCAACCGTTCTTATTGCTGGCGGCCTGAGGAGCCCATC\underline{ATC}GCGACGCCCCCTAAGC\\ GGCGGCGGTGGAGGCCACGGGGGAAAAGTGCTGCGCTACGAGACCTTCATCAGTGACGTGCTGCAGCGGGACT\\ TGCGAAAGGTGCTGGACCATCGAGACAAGGTATATGAGCAGCTGGCCAAATACCTTCAACTGAGAAATGTCATTG\\ AGCGACTCCAGGAAGCTAAGCACCTCGGAGTTATATATGCAGGTGGATTTTGGGCTGTAACTTCTTCGTTGACACAG\\ TGGTCCCAGATACTTCACGCATCTATGTGGCCCTGGGATATGGTTTTTTCCTGGAGTTGACACTGGCAGAAGCTC\\ TCAAGTTCATTGATCGTAAGAGCTCTCTCCTCACAGAGCTCAGCAACAGCCTCACCAAGGACTCCATGAATATCA\\ AAGCCCATATCCACATGTTGCTAGAGGGGGCTTAGAGAACTACAAGGCCTGCAGAATTTCCCAGAGAAGCCTCACC\\ AT\underline{TGA}CTTCTTCCCCCCATCCTCAGACATTAAAGAGCCTGAATGCCTTT\\ \\ \label{thm:compact}$

 ${\tt MATPPKRRAVEATGEKVLRYETFISDVLQRDLRKVLDHRDKVYEQLAKYLQLRNVIERLQEAKHSELYMQVDLGC} \\ {\tt NFFVDTVVPDTSRIYVALGYGFFLELTLAEALKFIDRKSSLLTELSNSLTKDSMNIKAHIHMLLEGLRELQGLQNFPEKPHH} \\$

GCCTGGAATAGCCTGGCTACTACCCCTGCACCTGTTCCCCTGCTGTCCCCAGGCCTCTCTGCCTGAATCTGCCTC GCTGGTGTGTCTGGTCCTACCCTCTGTTTGGGGAGCTGTCTGGCTCTGTCCCCCACCTCTTGGCCAGCCTGTGTC TCCTGTCTATGACTGAGCCCAATTGCCTGTTGCCTTTCTGCAGGTGTTTCCACGAGCCTATCCCTACCCACCTGT TTGTTTCTGAGTCTGCCTGTGTCCCTTTCTCCCTGTCTCTGCCTGTCTTCCAAGCTCCCCTAGCATCCCCTCC CTGCTCTGTGAGTCCATCCCCTCTGTCTGCCTGTCACTCTCTAGCTGTGGGTCTACACCCTCAATCTTTCAGG AAAAGTACCGCTCCAGAGCAGGAGCCTAGGCAGCCGAGAGGGTGCCCGAACCTGAGTCTGAGTTGCGGCCACTTC CAGGCAAGAACGTGAGGGCTTCCTGCCCAGTCGTGGTCCTGCTCCTGGGAGCAAGCCGGTCCAGTTCATGGATTT CGAGGGGAAGACATCGTTTGGAATGTCAGTGTTCAACCTCAGCAACGCCATCATGGGCAGCGGCATCCTGGGGCT GGCCTATGCCATGGCCCACACGGGGGTCATCTTCTTCCTGGCCCTGCTGCTGCATTGCGCTTCTGTCGTCCTA CATCATCAAATCTGAGCTCCCCCTGGTTATCGGCACCTTCCTGTACATGGACCCCGAGGGGGACTGGTTCTTGAA GGGAAACCTCCTCATCATCATCGTCAGTGTGTTAATCATCCTGCCCCTCGCCCTCATGAAACACTTGGGCTACCT GGGGTACACCAGTGGTCTCTCTCTGACCTGCATGCTGTTTTTCCTTGTTTCGGTCATCTACAAGAAGTTCCAACT TGGCTGTGCTATAGGCCACAATGAAACAGCAATGGAGAGTGAAGCTCTCGTGGGACTCCCCAGCCAAGGACTCAA ${\tt CAGCAGCTGTGAGGCCCAGATGTTCACAGTTGACTCACAGATGTCCTACACAGTGCCCATTATGGCTTTTGCTTT}$ TGTCTGCCACCCTGAGGTGCTGCCCATCTATACGGAGCTCTGCCGGCCCTCCAAGCGCAGGATGCAGGCCGTGGC CAACGTGTCCATTGGGGCCATGTTCTGCATGTATGGGCTCACAGCAACCTTTGGATACCTCACCTTCTACAGCAG ${\tt TGTGAAGGCGGAGATGCTGCACATGTACAGCCAGAAGGACCCGCTCATCCTCTGTGTGCGCCTGGCCGTGCTGCT}$ $\tt CGCGGTGACCCTCACTGTGCCAGTCGTGCTGTTCCCTATCCGCCGGGCCCTGCAGCAGCTGCTTTTCCCAGGCAA$ GGCCTTCAGCTGGCCACGACATGTGGCCATAGCTCTGATCCTGCTTGTTTTGGTCAATGTCCTTGTCATCTGTGT GCCAACCATCCGGGATATCTTTGGAGTTATCGGGTCCACCTCAGCCCCAGCCTCATCTTCATCCTCCCCAGCAT $\tt CTTCTACCTCCGCATTGTACCCTCTGAGGTGGAGCCTTTCTTATCCTGGCCCAAGATCCAGGCCCTGTGCTTTGG$ ${\tt AGTCCTGGGAGTCCTCTTCATGGCCGTCAGTCTAGGCTTTATGTTTGCCAACTGGGCCACAGGCCAGAGCCGCAT}$ GTCTGGACACTGATCAGGCCCTGCTGGCCCAGGTCCCTGTGCGCATGCACATGGAGGGGTCAGGGCCGCTCCCTA GGGTCCCTCCTGCCCAACATGTGGAGGTGGCTGGTTCCCATGAACGTGGTTGTCAGAGGCGGGGGACAGCAGAGG $\verb|CTGCAGACTGGCCCACTTCCCTCCCCAGGGATGCCAAGCTTGGATCATGGCCCTAATCCCAACCCCAACCCC| \\$ GTGGAGCCTTTGCCCAGCCCAGTCCTCTCTGCCTCCTGGCTGAAGCTGTTTGTCAGGATTACCCTCGGGCTA AAGAGGAAAAATAAAGATGTTGAGCTACC

CCTGTTTTTTGTGCTCCTCCGAGCTCGCTGTTCGTCCGGGTTTTTTACGTTTTAATTTCCAGGACTTGAACTGCC ATGTCCTCTGAAGAAGGAAAGCTCTTCGTGGGAGGGCTCAACTTTAACACCGACGAGCAGGCACTGGAAGACCAC TTCAGCAGTTTCGGACCTATCTCTGAGGGTGAGACGGCCCATACTCACAATGGGGGTTGGTGAGAGAAAGTCTGG GATCCTTGCATTTCAAGGAGTATTAACTGAAAAGTTAGGACCCACGCCTCCAAATTCTTTTTCTTCCTAAGCCTA CACAGTGGTCGTTGTCAAGGACCGGGAGACTCAGCGGTCCAGGGGTTTTGGTTTCATCACCTTCACCAACCCAGA GCATGCTTCAGTTGCCATGAGAGCCATGAACGGAGAGGTGGGGCCTCCTATCTGCAGAGGGACCTTGTCCCCATC TGCGGCTTCCTTCATTCTTTTTTTTTTCCCTCTGTGTCTCGCGGGCAGCGTGGCCACCAAGCCCCGCAGTGC GGCGACGACTGGTCCTGCATGAGGCCGAGAAGCCACCTGTGGATGGTTGACCTGCCTTGGGCTTAGGTAGTAGAG TCTGCAGACCTGTGGGCCTGGCCCGGAGAGGACCTCGTGAGTCTTCTGACATGGACTCTGAAGCCTCAAACCAAG AGAGGTGTCTGTCTAGCCCTGATAGTCGGGCAGCTTAGAGGAGTGGGGAGGAGAACTCAGCCTGAGTTCAGTCAA GATGTAAGTAGCAAGGGGAACATGGTGCATTCAGGTCATTTTGTGTGGGATTCTATAGCTCCTGATGAAGCC ATTCTGGGGTAAAGGAGCTTATTCTGGAACATGGCACCCAGAACCTGGTGCCCAGCAGCAGTTTTTGGCCTCTTT ACACTTAGTCTCTGGATGGTCGTCAGATCCGTGTGGATCATGCAGGCAAGTCTGCTCGGGGAACCAGAGGAGGTG GCTTTGGGGCCCATGGGCGTGGTCGCAGCTACTCTAGAGGTGGTGGGGACCAGGGCTATGGGAGTGGCAGGTATT ATGACAGTCGACCTGGAGGGTATGGATATGGATATGGACGTTCCAGAGACTATAATGGCAGAAACCAGGGTGGTT ATGACCGCTACTCAGGAGGAAATTACAGAGACAATTATGACAACTGAAATGAGACATGCACATAATATAGGTGAG ACTTGGATATCGGCATTGAGTGAACCTGTTTGTCACACTCTGTCATGACCCTCTCACCTTTTCTGGCAAGACTGC GGTGCATATCAGAGCAAGTTTGCTAGGGGGTGGGATCTGAAAACCCATCTCCTATAATCTTCTACTCTTGTGTGG GATGGAGGAAATGAAGGTGTGTCCCTGTTGTCCAACCCTCAGCATCTTCATCAGCTCTAGGAGGTGAGCATGTTG TCAGCTGTTACTTCATGACATCACAATTCTCCCCCTCTTGCTGTTCCCAGATACACAAGGAATAATTTCTGATCC AGGATCGTCCTTCCAAATGGCTGTATTTATAAAGGTTTTTGGAGCTGCACTGAAGCATCTTATTTTATAGTATAT TTTTCTGCCTATTTAAAGACAAATTATGGGACGTTTGTAGAACCTGAGTATTTTTCTTTTTACCAGTTTTTTAGT TGTGTATCCAGGGACATTTTAAAAACCTGTACACAGTGTTTATTGTGGTTAGGAAGCAATTTCCCAATGTACCTA TAAGAAATGTGCATCAAGCCAGCCTGACCAACATGGTGAAACCCCATCTGTACTAAACATAAAAAAATTAGCCTG GCATGGTGGTGTACGCCTGTAATCCCAGTGACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCGGGAGGCGG AAATGTGTATCAAGAACATGATTATCCAGGGGTATTTTCTAATTCAGATCATCAAACTGATTATATAGAAGAGTT GGCTTTAAAATGTTTGCAAATGTCTTTTTTTTTAATACTGGAAGAAAAAATATTCTGTTGTGTCTCATACAGT GCTTAGGATGTCTTTCACAGAGCTTATTAAAAAGATGAAACCTG

MAPRTWCPAGIFGLFCPLTLACSSLTIALTDCQPIILVSPTLSLWMVVRSVWIMQASLLGEPEEVALGPMGVVAA TLEVVGTRAMGVAGIMTVDLEGMDMDMDVPETIMAETRVVMTATQEEITETIMTTEMRHAHNIGETWISALSEPV CHTLS

TCTTGCCTGGAGCCTGAGAAAGGGAGAGACAGAAGGAACCGGCGACAGTGGTCTCAGGGCCGCTCCGGGGGG CCTCAAGAACCGGAGGCAGCCCCGGAGGTGGTCCCCGATCCCGGGCTATGCTCTTGGATCTGAGAAGGGAAGGCG ACTGGGGAGGGGGGGTGTCTGTTCTGAATCGCTGTGTGTCACCCGGGCGCTGCCCAGGAAGGGCAGGGCTGGGGT CGCCTGGTGGAAGGGACGGAACTAGATCCCTTCGCTCGGGACGCTCACATTCCAGGCCCTTGTCCTGCAGGCTGC CGCGGCCGACACGCCAGAGGAGGACGGCGGGGAATGCCCGCGGTGTGGCAGCAAGTCTTAGCAGTGGACGCGAG GGAGAATGCCAAGGCTGGGCACCCCCAGCGCTGCGTCGGCAGTACCTGAGGCTTCGGGGGCAGCTGCTGGGCCA GCGCTACGGGCCCCTCTCCGAGCCAGGCAGTGCTCGTGCCTATAGCAACAGCATCGTCCGCAGTAGCCGCACTAC TCTTGACCGCATGGAGGACTTTGAGGATGATCCTCGGGCCCTGGGGGCCCGTGGGCACCGTCGTTCTGTCAGCAG AGGCTCCTACCAGCTGCAGGCGCAGATGAACCGTGCCGTCTATGAGGACAGGCCCCCTGGCAGCGTGGTGCCCAC GTCAGCAGCAGAGGCAAGTCGGGCCATGGCCGGGGACACGTCACTGAGCGAGAACTATGCCTTTGCGGGCATGTA TCATGTTTTTGACCAGCACGTGGATGAGGCAGTCCCAAGGGTGCGCTTCGCCAATGATGACCGACACCGCCTGGC GGGCCACACCCGTGGTGTCTCCGACTTCGCCTGGTCCCTCTCCAATGACATCCTCGTGTCCACCTCACTGGATGC CACCATGCGCATCTGGGCCTCTGAGGATGGTCGCTGCATCCGAGAGATCCCTGACCCCGATAGCGCTGAACTGCT CTGCTGCACCTTCCAGCCTGTCAACAACAACCTCACTGTGGTGGGGAACGCCAAGCACAACGTGCATGTCATGAA CATCTCCACAGGCAAGAAAGTGAAGGGGGGCTCCAGCAAGCTGACAGGCCGTGTCCTTGCTCTTTGATGC $\verb|CCCTGGCCGGCTGCTCTGGGCGGGTGATGACCGTGGCAGTGTCTTCTCTTTCCTCTTTGATATGGCCACAGGGAA| \\$ GCTGACCAAAGCCAAGCGTTTGGTGGTGCATGAGGGGAGCCCTGTGACCAGCATCTCAGCCCGGTCCTGGGTCAG $\verb|CCGCGAGGCCCGGGATCCCTCACTGCTCATCAATGCTTGCCTCAACAAGTTGCTGCTCTACAGGGTGGTAGACAA|$ CGAGGGGACCCTGCAGCTGAAGAGAAGCTTCCCCATCGAGCAGAGCTCACATCCTGTGCGCAGCATCTTCTGTCC GCGGGCGCCAAGGCTGCTGTCAACAAGCTGCAGGGCCACAGTGCACCTGTGCTTGATGTCAGCTTCAACTGCGA $\tt CGAGAGCCTACTGGCCTCCAGTGACGCCAGCGGCATGGTCATCGTCTGGAGGCGGAGCAGAAG{\color{red}{\textbf{TAG}}} GGTCCTGT$ TGAGGGCCGGCTCCCAGCTCTGCCGGGGACGGACAGGGCAGGGCAGCGGCAGCTCCAGGAACACGGTGAAAA AAAAAAA

MAAVWQQVLAVDARYNAYRTPTFPQFRTQYIRRRSQLLRENAKAGHPPALRRQYLRLRGQLLGQRYGPLSEPGSA RAYSNSIVRSSRTTLDRMEDFEDDPRALGARGHRRSVSRGSYQLQAQMNRAVYEDRPPGSVVPTSAAEASRAMAG DTSLSENYAFAGMYHVFDQHVDEAVPRVRFANDDRHRLACCSLDGSISLCQLVPAPPTVLRVLRGHTRGVSDFAW SLSNDILVSTSLDATMRIWASEDGRCIREIPDPDSAELLCCTFQPVNNNLTVVGNAKHNVHVMNISTGKKVKGGS SKLTGRVLALSFDAPGRLLWAGDDRGSVFSFLFDMATGKLTKAKRLVVHEGSPVTSISARSWVSREARDPSLLIN ACLNKLLLYRVVDNEGTLQLKRSFPIEQSSHPVRSIFCPLMSFRQGACVVTGSEDMCVHFFDVERAAKAAVNKLQ GHSAPVLDVSFNCDESLLASSDASGMVIVWRREQK

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TTGATGTTTTCCAGTCATTCCGGCTGACAGCGTTCAAGTTGGAATCCTGGAGGGGAGGTGTTTTTCCTGTCGTAC GTGGGACAGGCCACGCTGTCCGTCCGCAGTACCGACGCCTGCAGGTCAGAGCTTCGGGGAGAAAAGTGAAGAGCA AGACGGAACTGACGGGGAGAAAGGCTGGGAACCAGGGTGTCGACTTTGACTGAAATTTGAGACGGAGGGCACCGG CAATTGTTGTGGCGGCGGCGGCGATTTTGCCCACGTACTTCCGAGTAAGGGGCGGGGCTGTGCCCTGGCGCG CGTGCGCAGCGCCCCGGGGCCCCACCCGGTAGTGCAAGAACCTGCGAGGGGGCGGAGCGAAGAGGTGCTTGTTTT GGTTCTGTTTCCTTTGAAGCAGAAGGCCGGAACAAGCGTAGCAATAAACTTGCTGGACTTGGAGAAGAGGCTAAG CGCCGCCGCCGCCGCCGCCGCCGCCGCCGAGGGTTCTCGAACCGGTGCCGCGATCCCTTTATCCGGGTC GTTTGTTGGGGGGTACTCGGCAGTGCAGCCATGACTATACTCCCCAAAAAGAAGCCGCCGCCTCCCGACGCCGAC GGCGGCACGGGCGTGGGCGGCGATCGCGACCGTGACTCCGGCGTCGTGGGGGCCCGTCCGCGAGCTTCGCCA $\tt CCGCCTCAAGGCCCGCTACCAGGACCGCCGGGCGCTCTTCATCGCTGGCGCTGGCCGTGCCGCCTGGTGCAGTG$ GCGGGTCCCCGGCCACACAGGCTTCTCCACCTCCTTGCGGGGGCCCAGGTGGTCCCGGCGGCGGTCCCGGCGAC GGCTGCTCCGGGCCTGGGCACAGCAAGCGGCGACGTCAAGCTCCCGGGGTTGGCGGGGTTGGCGGGGGCAGT $\tt CCCGAGCGTGAGGAGGTCGGCGCAGGCTACAACAGTGAGGACGAGTATGAGGCGGCTGCAGCACGCATCGAGGCT$ ATGGACCCTGCCACTGTCGAGCAGCAGGAGCATTGGTTTGAAAAGGCCCTACGAGACAAGAAGGGCTTCATCATC AAGCAGATGAAGGAGGATGGCGCCTGTCTCTCCCGGGCTGTAGCTGACCAGGTGTATGGAGACCAGGACATGCAT GAGGTTGTGCGAAAGCATTGCATGGACTATCTGATGAAGAATGCCGACTACTTCTCCAACTATGTCACAGAGGAC TTTACCACCTACATTAACAGGAAGCGGAAAAACAATTGCCATGGCAACCACATTGAGATGCAGGCCATGGCAGAG ATGTACAACCGTCCTGTGGAGGTGTACCAGTACAGCACAGAACCCATCAACACTTCCATGGGATACATCAAAAAC GAGGACGAACCCATTCGTGTTAGCTACCATCGGAATATCCACTATAATTCAGTGGTGAATCCTAACAAGGCCACC ATTGGTGTGGGGCTGGGCCTGCCATCATTCAAACCAGGGTTTGCAGAGCAGTCTCTGATGAAGAATGCCATAAAA ACATCGGAGGAGTCATGGATTGAACAGCAGATGCTAGAAGACAAGAAACGGGCCACAGACTGGGAGGCCACAAAT GAAGCCATCGAGGAGCAGGTGGCTCGGGAATCCTACCTGCAGTGGTTGCGGGATCAGGAGAAACAGGCTCGCCAG GTCCGAGCCCCAGCCAGCCCGGAAAGCCAGCGCCACATGCAGTTCGGCCACAGCAGCAGCCTCCAGTGGCCTG GAGGAGTGGACTAGCCGGTCCCCGCGGCAGCGGAGTTCAGCCTCGTCACCTGAGCACCCTGAGCTGCATGCTGAA TTGGGCATGAAGCCCCCTTCCCCAGGCACTGTTTTAGCTCTTGCCAAACCTCCTTCGCCCTGTGCGCCAGGTACA AGCAGTCAGTTCTCGGCAGGGGCCGACCGGGCAACTTCCCCCCTTGTGTCCCTCTACCCTGCTTTGGAGTGCCGG GCCCTCATTCAGCAGATGTCCCCCTCTGCCTTTGGTCTGAATGACTGGGAAGATAGACAAGAGGCACACAGAGAC TTCCAAGATGAGAAAAACTTGCCGCCACCCCCGACACTGATGCCAGGGAGGTGGGAGGAGAAGTGGGAAATTT TAAAATC

MTILPKKKPPPPDADPGGTGVGGGDRDRDSGVVGARPRASPPPQGPLPGPPGALHRWALAVPPGAVAGPRPQQAS
PPPCGGPGGPGGPGGPGDALGAAAAGVGAAGVVVGVGGAVGVGGCCSGPGHSKRRRQAPGVGAVGGGSPEREEVGAG
YNSEDEYEAAAARIEAMDPATVEQQEHWFEKALRDKKGFIIKQMKEDGACLFRAVADQVYGDQDMHEVVRKHCMD
YLMKNADYFSNYVTEDFTTYINRKRKNNCHGNHIEMQAMAEMYNRPVEVYQYSTEPINTFHGIHQNEDEPIRVSY
HRNIHYNSVVNPNKATIGVGLGLPSFKPGFAEQSLMKNAIKTSEESWIEQQMLEDKKRATDWEATNEAIEEQVAR
ESYLQWLRDQEKQARQVRGPSQPRKASATCSSATAAASSGLEEWTSRSPRQRSSASSPEHPELHAELGMKPPSPG
TVLALAKPPSPCAPGTSSQFSAGADRATSPLVSLYPALECRALIQQMSPSAFGLNDWEDRQEAHRDRPTGSQAAP
EERDIQTEESLPAPHSFQDEKNLPPPPDTDAREVGGRSGKFPFPVPPRTSEPSMLNFFFIKITFIL

MADSERLSAPGCWAACTNFSRTRKGILLFAEIILCLVILICFSASTPGYSSLSVIEMILAAIFFVVYMCDLHTKI PFINWPWSDFFRTLIAAILYLITSIVVLVERGNHSKIVAGVLGLIATCLFGYDAYVTFPVRQPRHTAAPTDPADG PV

GAGCACGGAGCAGGGTTTCTACAGCTGCTCCCCACTTTCTCGGACCCGGTCCTGGACCCAGCCCCCGACTCCGAC ACGGCTCCACCATGGAGGGGGGGCCGAATCCTCATCCATTCGCTGCGCCAGGCCGGCACGGCAGTTCCTCCAG CTGCGGTGGCCTCTGCCCTCTGCCCTCTTGCCATGTCTGCCGGTTCCGCCTGGCCATGAGCCTGG CTCAGGCCTGCATGGACCTGGGCTATCCCTTGGAGCTTGGCTATCAGAACTTCCTCTACCCCAGTGAGCCTGACC TCCGAGACCTGCTTCTTCTTGGCTGAGCGTCTGCCCACCGATGCCTCTGAGGATGCAGACCAGCCTGCAGGTG ACTCAGCTATTCTCCTCCGGGCCATTGGGAGCCAAATTCGGGACCAGCTGGCACTGCCTTGGGTCCCGCCCCACC TTCGCACTCCCAAGCTGCAGCACCTCCAGGGCTCGGCCCTCCAGAAGCCTTTCCATGCCAGCAGGCTGGTCGTGC CAGAATTGAGTTCCAGAGGTGAGCCACGGGAGTTCCAGGCGAGTCCCTGCTTCCAGTCCCTACCCAGGTGC CTCAGCCTGTTGGAAGGGTGGCCTCGCTCCTCGAACACCATGCCCTGCAGCTCTGCCAGCAGACGGGCCGGGACC GGCCAGGGGATGAGGACTGGGTCCACCGGACATCCCGCCTCCCACCCCAGGAGGACACACGGGCTCAGCGGCAGC GGCTGCAAAAGCAACTGACTGAGCATCTGCGCCAAAGCTGGGGCCTGCTTGGGGCCCCCATACAAGCCCGGGACC TGGGAGAACTGCTGCAGGCCTGGGGTGCTGGGGCCAAGACTGGTGCTCCTAAGGGCTCCCGCTTCACGCACTCAG CTGAACAGGTCACGTGGGCAGCTCAGGAACAGGAGCTCGAGTCCCTTCGGGAGCAGCTGGAAGGAGTGAACCGCA GCAAGCTCAGTACAGCAGAGCGTGAGCAGGCCCTGCGCCTGAAGAGCCGCGCGGTGGAGCTGCTGCCCGATGGGA CTGCCAACCTTGCCAAGCTGCAGCTTGTGGTGGAGAATAGTGCCCAGCGGGTCATCCACTTGGCGGGTCAGTGGG AGAAGCACCGGGTCCCACTCCTCGCTGAGTACCGCCACCTCCGAAAGCTGCAGGATTGCAGAGAGCTGGAATCTT AGGTCTATAAGCAGCTGATGTCAGAGCTGGAGACTCTGCCCAGAGATGTGTCCCGGCTGGCCTACACCCAGCGCA TCCTGGAGATCGTGGGCAACATCCGGAAGCAGAAGGAAGAGATCACCAAGATCTTGTCTGATACGAAGGAGCTTC AGAAGGAAATCAACTCCCTATCTGGGAAGCTGGACCGGACGTTTGCGGTGACTGATGAGCTTGTGTTCAAGGATG AGACCATCGAGGACACAGGCACCATCATGCGGGAGGTTCGAGACCTCGAGGAGCAGATCGAGACAGAGCTGGGCA AGAAGACCCTCAGCAACCTGGAGAAGATCCGGGAGGACTACCGAGCCCTCCGCCAGGAGAACGCTGGCCTCCTAG GGCAGTGGCCAAGCACATGCCCTAGCTACTTCCTCCGCTGTCCAGTTCCTCCTGCTGCGGCCTTGGACCCAGACC CCTGCCCACTGACCGCAACCCTTATATGGGGTGATAGTCCAGCATGTGGGGAGCTCGGCTGCAGTTTATTGGGGA CGGTACTGTGGGTTGGGGCCTTGGATCCCAAATAAATGAGTAGTTCCTCTGC

MEEADRILIHSLRQAGTAVPPDVQTLRAFTTELVVEAVVRCLRVINPAVGSGLSPLLPLAMSARFRLAMSLAQAC MDLGYPLELGYQNFLYPSEPDLRDLLLFLAERLPTDASEDADQPAGDSAILLRAIGSQIRDQLALPWVPPHLRTP KLQHLQGSALQKPFHASRLVVPELSSRGEPREFQASPLLLPVPTQVPQPVGRVASLLEHHALQLCQQTGRDRPGD EDWVHRTSRLPPQEDTRAQRQRLQKQLTEHLRQSWGLLGAPIQARDLGELLQAWGAGAKTGAPKGSRFTHSEKFT FHLEPQAQATQVSDVPATSRRPEQVTWAAQEQELESLREQLEGVNRSIEEVEADMKTLGVSFVQAESECRHSKLS TAEREQALRLKSRAVELLPDGTANLAKLQLVVENSAQRVIHLAGQWEKHRVPLLAEYRHLRKLQDCRELESSRRL AEIQELHQSVRAAAEEARRKEEVYKQLMSELETLPRDVSRLAYTQRILEIVGNIRKQKEEITKILSDTKELQKEI NSLSGKLDRTFAVTDELVFKDAKKDDAVRKAYKYLAALHENCSQLIQTIEDTGTIMREVRDLEEQIETELGKKTL SNLEKIREDYRALRQENAGLLGRVREA

WO 2004/030615 PCT/US2003/028547

6701/6881 FIGURE 6189A

AGCTCTCATCTCCCTGGGAGCCCGCAGCATGGCTGAGGGAAGCTTCAGCGTGCAATCGGAAAGCTACAGTGTTGA AGACATGGATGAGGGTAGCGACGAAGTCGGGGAGGAAGAGATGGTTGAAGGCAACGACTATGAAGAATTCGGTGC GTTTGGTGGCTATGGCACCCTCACCAGCTTTGACATCCATATCCTCAGAGCCTTCGGAAGCTTGGGTCCAGGCCT TCGCATCTTATCGAATGAGCCCTGGGAACTGGAAAACCCTGTGCTGGCCCAGACCCTGGTGGAGGCATTGCAGCT GGATCCGGAAACACTTGCCAATGAGACGGCCGCCCGTGCTGCCAACGTAGCCCGCGCCGCCGCCCCCAACCGTGC GGCTCGGGCCGTGCCGCTGCCCGTACCGCCTTCAGTCAGGTGGTCGCTAGCCACCGGGTGCCACGCCGCAG GTCTCAGGAGAGATACCCAGCCCACGACCTACGCCGCCGAGGTCAGGGGCCCACCCCTGAGCACCCCTTGCTTC TCCGCAGACCTCCCAGATGTTAGTCACCAGTAAGATGGCTGCCCCGGAGGCTCCGGCAACCTCCGCACAGTCCCA GACAGGCTCCCCGGCCCAGGAGGCTGCTACTGAGGGCCCTAGTAGCGCCTGTGCTTTCTCTCAGGCTCCGTGTGC CAGGGAGGTGGACGCCAACCGGCCCAGCACAGCCTTCCTGGGCCAGAATGATGTCTTCGATTTCACTCAGCCGGC AGGTGTCAGTGGCATGGCCTTCCCGCGCCCCAAGAGACCTGCCCCAAGAGGGCTGCCACAGAGGGCCCCAG TGCTGCCTCTGGTGTGCCCCAGACGGGACCTGGCAGGGGAGGTGGCAGCCACCCGGCCCAAGACCACCAAGTCGGG GAAGGCGCTGGCCAAGACTCGGTGGGTGGAGCCTCAGAATGTTGTGGCAGCAGCTGCTGCCAAGGCCAAGATGGC CACGAGCATCCCTGAGCCGGAGGGTGCAGCTGCTGCCACTGCTCAGCACAGTGCTGAGCCCTGGGCCAGGATGGG CCCTTTGCTTGCGTGCCACGGCTGGTCCCTCCATAGCCACAGGACGGGGTCCTGGCTGCGTCACCCTCGGCAGAG CTTGACCAAGGGGCTACAGCTCTATGACCCCTGCTCAGCCCAGGTGCTTTCTCCAACTCTTCCCCCTCCTGCAGA CATGCTGAAGGATGTCATCAGAGAATATGATGAACATTTCCCTGAGATCATTGAACGAGCAACGTACACCCTGGA AAAGGTGGGTGCAGGATGGGAGCAGCTCTGTGGGGGAAGAGCGGGCATGGGGGTGCGGTGACCCTGCAGCCCCTC AAGGCCCAGTCTCTGGAGCCATCTCTCACCTCTCCGACTCTGAGCTTCCACTGCACTGGCAGTTTGACTCGTGCT TCCTGCCCTCGGCTTCTCTCTCTCTCTCTGAGTGTCTCGCCGTCTGGCCAGGTGGGTCTCATCGCCTCTGC CAGCGTCAGCTCCCACAGCGAAGGTCTTCCGTGTGCTGTCTTCTTCTGCCCTCGCTCACGAGTTTGGATTCCTTG CTGAGGAGCAGTTCTAACCCGGAATCACTGTCTGCCGGCAGGATGCCAGCATGGGGTTTGGATCTCACACTCTGT TTTCTCCCCCACGTAGAAGTTTGGGATCCACCTGAAGGAGATCGACAAGGAAGAACACCTGTATATTCTTGTCTG CACACGGGACTCCTCAGCTCGCCTCCTTGGAAAGTAAGAAGGACACTCCCGAGGCTGATCTCTTTGGTGATCTC GGCGTCATCTTCATGAATGGCAACCGTGCCAGCGAGGCTGTCCTCTGGGAGGCACTACGCAAGATGGGACTGCGC CCTGGGTATGATTGGCCTCTCCAGCTCCTCCCCTCGGTGCTATCCTCTGGCCAAAGAGGTCCTGGGATTGCAATA GCCTGGTGGTCTGGCGCAAGGGCGTGGGGTGCCTGGGCTCGGTAGAGAGCAAAGGATCTCACCAGGGCGGATGGG GAAGCGGTGCTGGACGCTGCTCAGCCCTCTCTCTGCTCTGTGGCCCCAGATGACATCTAAGAGAGACAGTCAGAG TCAGGGATTCCATCAAATCCCTACCTGGGGCGTCCCTGACCAACAGTCCTCTGGCCTCTGCTGCATGCCCAGGCC ATTCCTTTCCTTGCCCTCAGGGTGAGGCACCCATTCCTCGGCGATCTGAGGAAGCTCATCACAGATGACTTTGTG AAGCAGAAGTAAGTATCACCTGAGCTAACTGCGGCTCTCACTCGAGCATCCTTTGTGTGCTGGTCTGGCTGAGAA TGCGAGTGTGTGGGGACCGAAGGCCAGGGCGGTCTTGGGAAAAGGGAGCTCACGTCACCTGAGAACACGGTGTGG GGTGTGAAAACGGCCGCCATCACCTTGAGCACCTGCCCTGTAGACTGACACAAGAGTTCCCCCTGGTTTACACCT AAGGAACCCGGAGCTCAGAGAGGAGACGCCTCTGAGCATGGCTCCCAGCTGGTAAGGGCCTCAGCCCAACTCTCC TGATTTTCAGGCCAGGGGCCACCCTCTCCCCGTCCCTGGAGGACTTGCCAACGCACAGGCGCGCATGCACACAA CAAAGGGTCAGGACTTGAGGAGGATGCCTGGAGCACGCTTCTCCTGGCTGACTGTTTCTTCCTCCCAGTCGTTT CCTCTGGTGGGCCTCTCCAGGGCTCCGCCGGGGTGTGGCCAAGACCCTCGAGGTGGGGTGTGCTCAGAGCAGGGG GCCTGAAGAATGGCTCCTCTGTTTACAACACCCCAACAGGAAGCTGGGGTCATCGTGATGAGGGGCACAAACTT GTGGCCTCCCTACAGACAAATGCCCTACATGTGGACCCCCTGCACCTCCGCATGGCTTCCGGGGAGGACCAATGG CAAAAGGCTTTGAAGGCCTCACTTTTGCAGGCAGAAGTCCTGGGAGTGGGTTTGGGAATGAGTGAAGGGCTGGAG GGGCAGGACAGTCCTCTTCCAGGAGCTGAGCTGCGGCATCGGGTTGAGGAGGGGCCCCCTGGAACCCATCCGTTC AGCAACAGGTCTGCTTGGCTAGCAGCAAAGTTTACTTTCCTCTCATGCCAAGGTACCTGGAATACAAGAAGATCC

6702/6881 FIGURE 6189B

FIGURE 6190

MAAACRSVKGLVAVITGGASGLGLATAERLVGQGASAVLLDLPNSGGEAQAKKLGNNCVFAPADVTSEKDVQTAL ALAKGKFGRVDVAVNCAGIAVASKTYNLKKGQTHTLEDFQRVLDVNLMGTFNVIRLVAGEMGQNEPDQGGQRGVI INTASVAAFEGQVGQAAYSASKGGIVGMTLPIARDLAPIGIRVMTIAPGLFGTPLLTSLPEKVCNFLASQVPFPS RLGDPAEYAHLVQAIIENPFLNGEVIRLDGAIRMQP

PCT/US2003/028547

6705/6881 FIGURE 6192A

 ${\tt GCCTGTCCTACTGCCGCCGCCGCCGCCGCCGTC} \underline{{\tt ATG}} {\tt GGGTTCCTGAAACTGATTGAGAATTGAGAACTTTAAGTCG}$ TACAAGGGTCGACAGATTATCGGACCATTTCAGAGGTTCACCGCCATCATTGGACCCAATGGCTCTGGTAAGTCA AATCTCATGGATGCCATCAGCTTTGTGCTAGGTGAAAAAACCAGCAACCTGCGGGTAAAGACCCTGCGGGACCTG GAGGACCGTACCTTTGCCCGTGTCATTGTAGGAGGTTCTTCTGAGTACAAGATCAACAAAAGTGGTCCAACTA CATGAGTACAGTGAGGAATTAGAGAAGTTGGGCATTCTCATCAAAGCTCGTAACTTCCTCGTTTTCCAGGGTGCT GTGGAATCTATTGCCATGAAGAACCCCAAAGAGAGAGACAGCTCTATTTGAAGAGATTAGTCGTTCTGGGGAGCTG GCGCAGGAGTATGACAAGCGAAAGAAGGAAATGGTGAAGGCTGAAGAGGACACACAGTTTAATTACCATCGCAAG GAGGTAGTACGGGCTCAGGTACAGCTGCAGCTCTTTAAGCTTTACCATAATGAAGTGGAAATTGAGAAGCTCAAC AAGGAACTGGCCTCAAAGAACAAGGAGATCGAGAAGGACAAGAAGCGTATGGACAAGGTGGAGGATGAACTGAAG GAGAAGAAGAAGGAGCTGGGCAAAATGATGCGGGAGCAGCAGCAGATTGAGAAGGAGATCAAGGAGAAGGACTCA GAATTGAACCAGAAGCGGCCTCAGTACATCAAAGCCAAGGAGAACACCTCCCACAAAATCAAGAAGCTGGAAGCA GCCAAGAAGTCTCTGCAGAATGCTCAGAAGCACTACAAGAAGCGTAAAGGTGACATGGATGAGCTGGAGAAGGAG ATGCTGTCAGTGGAGAAGGCTCGGCAGGAGTTTGAAGAACGGATGGAAGAAGAGAGTCAGAGTCAGGGCAGAGAT TTGACGTTGGAGGAGAATCAGGTGAAGAAATACCACCGGTTGAAAGAAGAAGCCAGCAAGAGAGCCAGCTACCCTG GCCCAGGAGCTGGAGAAATTCAATCGAGACCAGAAAGCTGACCAGGACCGTCTGGATCTGGAAGAACGGAAGAAA GTAGAGACAGAGCCAAGATCAAGCAAAAGCTGCGGGAAATTGAAGAGAATCAGAAGCGGATTGAGAAACTGGAG GAATACATCACCACTAGCAAGCAGTCCCTAGAAGAGCAGAAGAAGCTAGAGGGGGGAGCTGACAGAGGAGGTGGAG ATGGCCAAGCGGCGTATTGATGAAATCAATAAGGAGCTGAACCAGGTGATGGAGCAGCTAGGGGATGCCCGCATC GACCGCCAGGAGAGCCGCCAGCAGCGAAAGGCAGAGATAATGGAAAGCATCAAGCGCCTTTACCCTGGCTCT GTGTACGGCCGCCTCATTGACCTATGCCAGCCCACACAAAAGAAGTATCAGATTGCTGTAACCAAGGTTTTGGGC AAGAACATGGATGCCATTATTGTGGACTCGGAGAAGACAGGCCGGGACTGTATTCAGTATATCAAGGAGCAGCGT GGGGAGCCTGAGACCTTCTTGCCTCTTGACTACCTGGAGGTGAAGCCTACAGATGAGAAACTCCGGGAGCTGAAG GGGGCCAAGCTAGTGATTGATGTGATTCGCTATGAGCCACCTCATATCAAAAAGGCCCTGCAGTATGCTTGTGGC AATGCCCTTGTCTGTGACAACGTGGAAGATGCCCGCCGCATTGCCTTTGGAGGCCCACCAGCGCCACAAGACAGTG GCACTGGATGGAACCCTATTCCAGAAGTCAGGAGTGATCTCTGGTGGGGCCAGTGACCTGAAGGCCAAGGCACGG CGCTGGGATGAGAAAGCAGTAGACAAGTTGAAAGAGAAGAAGAGGAGCGCTTGACAGAGGAGCTGAAAGAGCAGATG AAGGCAAAACGGAAAGAGGCAGAGCTGCGTCAGGTGCAGTCTCAGGCCCATGGACTGCAGATGCGGCTCAAGTAC TCCCAGAGTGACCTAGAACAGACCAAGACACGACATCTAGCCCTGAATCTGCAGGAAAAATCCAAGCTGGAGAGT GAGCTAGCCAACTTTGGGCCTCGCATTAATGATATCAAGAGGATCATTCAGAGCCGAGAGAGGGAAATGAAAGAC TTGAAGGAGAAGATGAACCAGGTAGAGGATGAGGTGTTTGAAGAGTTTTGTCGGGAGATTGGTGTGCGCAACATC CGGGAGTTTGAGGAAGAAAAGGTGAAACGGCAGAATGAAATCGCCAAGAAGCGTTTGGAGTTTGAGAATCAGAAG ACTCGCTTGGGCATTCAGTTGGATTTTGAAAAGAACCAACTGAAGGAGGACCAAGATAAAGTACACATGTGGGAG CAGACAGTGAAAAAAGATGAAAATGAGATAGAAAAAGCTCAAAAAAGGAGGAACAAAGACACATGAAGATCATAGAT GAGACCATGGCTCAGCTACAAGACCTGAAGAATCAGCATCTGGCCAAGAAGTCGGAAGTGAATGACAAGAATCAT GAGATGGAGGAGATTCGTAAGAAACTCGGGGGCGCCAACAAGGAAATGACCCATTTACAGAAGGAGGTGACAGCC ATTGAGACCAAGCTTGAACAGAAGCGCAGTGACCGTCACAACTTGCTACAGGCCTGTAAGATGCAGGACATTAAG TTGCCACTGTCAAAAGGCACCATGGATGATATTAGTCAGGAAGAGGGTAGCTCCCAGGGGGAGGACTCAGTGAGT GGTTCACAGAGAATTTCCAGTATCTATGCACGAGAGGCCCTCATTGAGATTGACTACGGTGATCTGTGTGAGGAT CTGAAGGATGCCCAGGCTGAGGAAGAGATCAAGCAAGAGATGAACACACTGCAGCAGAAGCTGAATGAGCAGCAG AGTGTGCTTCAGCGTATTGCCGCCCCCAACATGAAGGCCATGGAAAAGCTGGAAAGTGTCCGAGACAAGTTCCAG GAGACCTCAGATGAGTTTGAAGCAGCCCGAAAGCGAGCAAAGAAGGCCAAGCAGGCATTCGAACAGATCAAGAAG GAGCGCTTTGACCGCTTCAATGCTTGTTTTGAATCTGTGGCTACCAACATTGATGAGATCTATAAGGCCCTGTCC CGCAATAGCAGTGCCCAGGCATTCCTGGGCCCTGAGAACCCTGAAGAGCCCTACTTGGATGGCATCAACTACAAC TGTGTGGCTCCTGGGAAACGCTTCCGGCCTATGGACAACTTGTCAGGCGGGGAGAAGACAGTGGCAGCTCTGGCC CTGCTCTTTGCCATCCACAGCTACAAGCCAGCCCCCTTCTTCGTCCTGGATGAGATTGATGCTGCCTTGGATAAC

6706/6881 FIGURE 6192B

AAGGAGGAGTTCTACACCAAGGCCGAGAGCCTCATTGGAGTCTATCCTGAGCAAGGGGACTGTGTGATCAGCAAA GTCCTGACCTTCGACCTCACCAAGTACCCAGATGCCAACCCCAACCCCAATGAGCAGTAGCAGTATTTTTGCCCT CCCGCCTGTCTGGATCCCTAAGCTGTCCCTCTCCCAATCTCTGGATATTTGACTCCCAACCTTCCCCCTACCTC CTGGCCCTTTTTGGTGTAGTCATGGGATTTAGGCACTGCTAATCAAGCATGAAGAGGAACAGAGGTGATGTTAGG TCTGGAGCAAAAATTCCTGAACGACAGGGAGTATTCTGGCCTCTGAAAGGAGGTGCTGAGCTGAACAGGGCCATC TGTTCATCACACACCCCCTTCCTCCCCCTCATCACCCATAATCGTGGGCCCCTTGGGCCTCTTGCCCACTGTG TGTGTGGGTATGTATGTGTATGTATCTATCCGCATGTGTGCATGTGAGTATGTTTGCAAAATAATAAAGGATA TTGGAGACCTGTTTTAGAAGGAGCCTAGGCTGAATTTGATTCCAAGAGAGCTTAGGATGACACCCCTGAGCT TCATTCATTTATGTATTCATCAGACACATACCGAACACCCTCTATTTGTCAGGCTCTGTGCTTGGAATACAGAGT CACTTTTTATCACTTACTAGTTGTTTGACCTTGGGCAAGTCATTTGACCTTCTGTGCCTCAGTTTCCTCATCTGT AAAATGGGGCTAACAATATTACCTACCTCATAGGATTTAATGATGTCAAGCTCCTCACTGGAGGCCTTATCCCTT CGTGGAGCCCACTAGGTGCCGACCCCTCAGAATATAACCCTCATGCCTGGACCCCTGAGAGCTTCTGATCCCAGC TATTAGGGACAGAAGCCTCCAAATCTGGAAGGTGCTGAATGCCCTGCTGACTGGGAAAGTTTCAGGGCACTG ATGGGGTCTACCTGGTAAGCGGAGGGCCTGAGGAAACCTGTAGCTTCAATCATGTCTGGTAACCGGGTGCCTGAG CCCCAATCTGGGTTGTGAGGAAATAGGGGAGAGGTATCCTGGGCCACATCCCAGCCTAACACCTGTGAGGTTCAT TTTAGGAACTAACCTCATTAGCTATAAGGATCATGCAGAGGCAGCAAAGCCGGGTGCGATGAGCTCAGCCTTTAC TCATTCACATACACCATCACACTTTAATTCCAATCTGTATATTGCTTTTTAAAAGTTAAGTCCATTCTAATTACC CAAATATGCATGAATTC

 ${\tt MGFLKLIEIENFKSYKGRQIIGPFQRFTAIIGPNGSGKSNLMDAISFVLGEKTSNLRVKTLRDLIHGAPVGKPAA}$ NRAFVSMVYSEEGAEDRTFARVIVGGSSEYKINNKVVQLHEYSEELEKLGILIKARNFLVFQGAVESIAMKNPKE RTALFEEISRSGELAQEYDKRKKEMVKAEEDTQFNYHRKKNIAAERKEAKQEKEEADRYQRLKDEVVRAQVQLQL FKLYHNEVEIEKLNKELASKNKEIEKDKKRMDKVEDELKEKKKELGKMMREQQQIEKEIKEKDSELNQKRPQYIK AKENTSHKIKKLEAAKKSLQNAQKHYKKRKGDMDELEKEMLSVEKARQEFEERMEEESQSQGRDLTLEENQVKKY ${\tt HRLKEEASKRAATLAQELEKFNRDQKADQDRLDLEERKKVETEAKIKQKLREIEENQKRIEKLEEYITTSKQSLE}$ EQKKLEGELTEEVEMAKRRIDEINKELNQVMEQLGDARIDRQESSRQQRKAEIMESIKRLYPGSVYGRLIDLCQP TQKKYQIAVTKVLGKNMDAIIVDSEKTGRDCIQYIKEQRGEPETFLPLDYLEVKPTDEKLRELKGAKLVIDVIRY EPPHIKKALQYACGNALVCDNVEDARRIAFGGHQRHKTVALDGTLFQKSGVISGGASDLKAKARRWDEKAVDKLK ${\tt EKKERLTEELKEQMKAKRKEAELRQVQSQAHGLQMRLKYSQSDLEQTKTRHLALNLQEKSKLESELANFGPRIND}$ IKRIIQSREREMKDLKEKMNQVEDEVFEEFCREIGVRNIREFEEEKVKRQNEIAKKRLEFENQKTRLGIQLDFEK NQLKEDQDKVHMWEQTVKKDENEIEKLKKEEQRHMKIIDETMAQLQDLKNQHLAKKSEVNDKNHEMEEIRKKLGG ANKEMTHLQKEVTAIETKLEQKRSDRHNLLQACKMQDIKLPLSKGTMDDISQEEGSSQGEDSVSGSQRISSIYAR EALIEIDYGDLCEDLKDAQAEEEIKQEMNTLQQKLNEQQSVLQRIAAPNMKAMEKLESVRDKFQETSDEFEAARK ${\tt RAKKAKQAFEQIKKERFDRFNACFESVATNIDEIYKALSRNSSAQAFLGPENPEEPYLDGINYNCVAPGKRFRPM}$ DNLSGGEKTVAALALLFAIHSYKPAPFFVLDEIDAALDNTNIGKVANYIKEQSTCNFQAIVISLKEEFYTKAESL IGVYPEQGDCVISKVLTFDLTKYPDANPNPNEQ

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CCGGGACGTCACGTGGACTGGGGCCGGATA**ATC**GCGGGCGCTGCAGAAGATGCGCGAGCTCTTTTCCGGGCTGGG GTCTGCGCGGCCCTGGAGGCCTGGCCGGCCTTGCAGATCGCTGTGGAGAATGGCTTCGGGGGTGTGCACAGCCAG GAGAAGGCCAAGTGGCTGGGGGGTGCAGTGGAGGATTACTTCATGCGCAATGCTGACTTGGAGCTAGATGAGGTG GAAGACTTCCTTGGAGAGCTGTTGACCAACGAGTTTGATACAGTTGTGGAAGACGGGAGTCTGCCCCAGGTGAGC CAGCAACTGCAGACCATGTTCCACCACTTCCAGAGGGGTGATGGGGCTGCTCTGAGGGAGATGGCCTCCTGCATC GACAGTGTGGAAGAGATGGAGGTCACAGCTACGAATGATGGGGCTGCTACAGATGGGGTCTGCCCCCAGCCTGAA CCCTCTGATCCAGACGCTCAGACTATTAAGGAAGAGGATATAGTGGAAGATGGCTGGACCATTGTCCGGAGAAAA AAATGAGTGGGGATGATTGGAAATGGCTTTGGGCCCTTATTTGCTGTTCTAAGAGTTGTCTGTAGGGGTTTTTTT GGGCAAGGAAAACCTAGGGTCCTTGGTCTTGGGGGTGGGGGGACCTTTTCCAGCATATTCCCCTGGGCCTTTAGT TAACATCCGAGTGACGAAGCCGGGTTCCCCAGTACAGTGTCTTTTGGGTGCGGTCATTGTGAGGAAGGGGATGAG TGAGTGTGGGTGTGGCTGGAGGAGGAGCTAGATGCCGGTGGACAGTGGGCAGGTGGATTTGGGGAGGAGAGATC AGCAGCAGCAGCAGTACTCAGTGATAGGGGGCTGGCTGGGTCAGGAATGGTGAGATGAACATGCAAGTGGAAGAG TCAGGAATTCGAAGACCTTGGCTAGGTGGTGAGCTTGGAAGAGCTGGGCTTTGTTTTCTGTCTCCTCTAACCTCT TAATCTGTGGCTTGACCTGTGAGTAGTAGCCTTAGAATCAGCCTTCTGGGAGCTCAGCTTCAGAGTTTACAAGGG CTATGAAAGTTACTGTAAGCCTGAAATAAACTGTATTTTCT

 ${\tt MAGAAEDARALFRAGVCAALEAWPALQIAVENGFGGVHSQEKAKWLGGAVEDYFMRNADLELDEVEDFLGELLTNEFDTVVEDGSLPQVSQQLQTMFHHFQRGDGAALREMASCITQRKCKVTATALKTARETDEDEDDVDSVEEMEVTATDGAATDGVCPQPEPSDPDAQTIKEEDIVEDGWTIVRRKK$

AGATCCCCGCCGGAAGTGAAGAGGAGCAAGCAGATTTGAACCTATCTGCTTTCAAGCTGGTCATCATGATGAAACT TAGACACAAAAATAAAAAGCCAGGTGAAGGTTCCAAGGGCCACAAGAAGATAAGTTGGCCCTACCCTCAGCCTGC AAAGCAAAATGGGAAGAAAGCAACCTCCAAAGTGCCCTCTGCACCTCATTTTGTTCACCCCAATGATCATGCCAA TCGAGAGGCTGAATTAAAGAAGAAGTGGGTTGAGGAGATGAGGGAGAAGCAGCAAGCCGCCCGGGAGCAAGAAAG ${\tt ACAAAAACGCAGGACCATTGAGAGCTACTGTCAGGATGTCCTAAGACGCCAGGAGGAGTTTGAGCATAAGGAGGA}$ AGTTTTGCAGGAATTAAATATGTTTCCTCAGCTGGATGACGAGGCCACGAGGAAGGCTTATTACAAGGAGTTCCG TAAGGTGGTGGAATACTCTGATGTGATTCTGGAAGTCCTGGATGCCAGAGACCCATTAGGCTGCCGCTGCTTCCA AATGGAGGAGGCTGTCCTGCGAGCACAAGGCAACAAGAAGCTGGTCCTGGTCTTGAACAAGATTGACCTGGTCCC CAAGGAGGTTGTGGAGAAATGGCTGGATTACCTTCGGAATGAGTTGCCAACCGTGGCTTTCAAGGCCAGTACCCA GCATCAGGTCAAAAACCTGAATCGTTGCAGTGTGCCAGTAGATCAGGCCTCTGAGTCACTGCTGAAAAGCAAAGC CIGCTTTGGAGCTGAAAACCTCATGAGGGTTCTGGGGAACTATTGCCGCCTTGGTGAAGTGCGCACCCACATTCG TGTGGGTGTTGTGGGTCTTCCCAATGTTGGGAAGAGCAGCCTGATCAATAGCCTGAAGCGCAGCCGCGCATGCAG ${\tt CGTGGGAGCTGTTCCTGGAATTACCAAATTCATGCAGGAGGTCTACCTGGACAAGTTCATCCGGCTCTTGGATGC}$ AGACCCTGTGACCCCAGTGGAGACCATCCTGCAGCGCTGCAACCTGGAGGAGATTTCCAACTATTATGGCGTCTC TGGGTTCCAGACCACTGAGCACTTTCTGACGGCAGTGGCCCACCGTTTGGGGAAGAAGAAGAAGAAGGAGGCTTATA TÁGTCAGGAACAGGCGGCCAAAGCTGTCCTAGCTGACTGGGTGAGCGGGAAGATCAGCTTCTATATACCACCACC AGCCACTCACACTCTGCCCACCCATCTCAGTGCTGAGATCGTTAAGGAAATGACCGAGGTCTTTGACATCGAGGA TACTGAGCAGGCCAATGAAGACACCATGGAATGCTTGGCCACCGGAGAATCTGATGAGCTGTTGGGTGACACGGA CCCACTTGAAATGGAGATCAAGTTGCTCCATTCTCCGATGACGAAAATAGCAGATGCCATTGAAAATAAAACCAC CGTGTATAAGATTGGAGATCTCACTGGGTATTGCACCAATCCGAACCGTCATCAGATGGGGTGGGCTAAACGCAA TGTGGACCACCGCCCTAAGAGCAACAGTATGGTGGATGTCTGCTCAGTGGACCGCCGCTCAGTGCTGCAGAGGAT CATGGAGACGGACCCCTGCAACAGGGCCAGGCTCTGGCATCTGCCCTGAAAAATAAGAAGAAGATGCAGAAACG TGCAGATAAAATCGCCAGCAAGCTGTCTGATTCCATGATGTCTGCTCTCGACCTCTCTGGCAATGCTGATGATGG TGTTGGTGACTAATCGACTGATCTCACTTCCCTTCCGCTCCAAGCACCAGTTCCGGTGGTACGGGGGAATACCAG TGAAATAGTTTGGTTCTCCCTGAAGCATCTGCATATTGAAAGAACGCTTTCCCCACTGTGTGTCTTCTCCCCCTC CTCCAGTAAAAACAGTCCCGGCTAGGTGCTGTGGCTCACGTCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGG CAGATCACCTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAATACAAA AAAATTTAGCCGTGCTTAGTGGCACCTATAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCCTGAACCT GGGAGACTAAGGCAGGAGAATCGCCTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCCAGACGGCACCATTGCACT CTAGCCTGGGCAACACACGAAACTCCGTCCC

FIGURE 6197

TAGAGAAGGCAGACGCATCCCGAACTCGCTGGAGGACAAGGCTCAGCTCTTGCCAGGCCAAATTGAGACATCCT GACACAAGCGAGAGTGGTGCAGGTCTAACTCGCTTCCAGGCTGAAGCCTCAGAAAAGGACAGTAGCTCGATGATG CAGACTCTGTTGACAGTGACCCAGAATGTGGAGGTCCCAGAGACACCGAAGGCCTCAAAGGCACTGGAGGTCTCA GAGGATGTGAAGGTCTCAAAAGCCTCTGGGGTCTCAAAGGCCACAGAGGTCTCAAAGACCCCAGAGGCTCGGGAG CATGTGGCTGATACAAAGGTCAATACAAAGGCTCAGGAGACTGAGGCTGCACCCTCTCAGGCCCCAGCAGATGAA CCTGAGCCTGAGAGTGCAGCTGCCCAGTCTCAGGAGAATCAGGATACTCGGCCCAAGGTCAAAGCCAAGAAAGCC CGAAAGGTGAAGCATCTGGATGGGGAAGAGGATGGCAGCAGTGATCAGAGTCAGGCTTCTGGAACCACAGGTGGC CGAAGGGTCTCAAAGGCCCTAATGGCCTCAATGGCCCGCAGGGCTTCAAGGGGTCCCATAGCCTTTTGGGCCCGC AGGGCATCAAGGACTCGGTTGGCTGGGCCCGGAGAGCCTTGCTCTCCCTGAGATCACCTAAAGCCCGTAGG GGCAAGGCTCGCCGTAGAGCTGCCAAGCTCCAGTCATCCCAAGAGCCTGAAGCACCACCACCTCGGGATGTGGCC CTTTTGCAAGGGAGGCCAAATGATTTGGTGAAGTACCTTTTGGCTAAAGACCAGACGAAGATTCCCATCAAGCGC TCGGACATGCTGAAGGACATCATCAAAGAATACACTGATGTGTACCCCGAAATCATTGAACGAGCAGGCTATTCC TTGGAGAAGGTATTTGGGATTCAATTGAAGGAAATTGATAAGAATGACCACTTGTACATTCTCCTCAGCACCTTA GAGCCCACTGATGCAGGCATACTGGGAACGACTAAGGACTCACCCAAGCTGGGTCTGCTCATGGTGCTTCTTAGC ATCATCTTCATGAATGGAAATCGGTCCAGTGAGGCTGTCATCTGGGAGGTGCTGCGCAAGTTGGGGCTGCCCCT GGGATACATCATTCACTCTTTGGGGACGTGAAGAAGCTCATCACTGATGAGTTTGTGAAGCAGAAGTACCTGGAC TATGCCAGAGTCCCCAATAGCAATCCCCCTGAATATGAGTTCTTCTGGGGCCTGCGCTCTTACTATGAGACCAGC AAGATGAAAGTCCTCAAGTTTGCCTGCAAGGTACAAAAGAAGGATCCCAAGGAATGGGCAGCTCAGTACCGAGAG GCGATGGAAGCGGATTTGAAGGCTGCAGCTGAGGCTGCAGCTGAAGCCAAGGCTAGGGCCGAGATTAGAGCTCGA ATGGGCATTGGGCTCGGAGAATGCTGCCGGGCCCTGCAACTGGGACGAAGCTGATATCGGACCCTGGGCC AAAGCCCGGATCCAGGCGGGAGCAGAAGCTAAAGCCAAAGCCCAAGAGAGTGGCAGTGCCAGCACTGGTGCCAGT ACCAGTACCAATAACAGTGCCAGTGCCAGCCAGCACCAGTGGTGGCTTCAGTGCTGGTGCCAGCCTGACCGCC ACTCTCACATTTGGGCTCTTCGCTGGCCTTGGTGGAGCTGGTGCCAGCACCAGTGGCAGCTCTGGTGCCTGTGGT $\verb|TTCTCCTACAAG| \textbf{TGA} \textbf{GATTTTAGATATTGTTAATCCTGCCAGTCTTTCTCTAAGCCAGGGTGCATCCTCAGAA| \\$ ACCTATCCAACACAGCACTCTAGGCAGCCACT

MSDTSESGAGLTRFQAEASEKDSSSMMQTLLTVTQNVEVPETPKASKALEVSEDVKVSKASGVSKATEVSKTPEA
REAPATQASSTTQLTDTQVLAAENKSLAADTKKQNADPQAVTMPATETKKVSHVADTKVNTKAQETEAAPSQAPA
DEPEPESAAAQSQENQDTRPKVKAKKARKVKHLDGEEDGSSDQSQASGTTGGRRVSKALMASMARRASRGPIAFW
ARRASRTRLAAWARRALLSLRSPKARRGKARRRAAKLQSSQEPEAPPPRDVALLQGRANDLVKYLLAKDQTKIPI
KRSDMLKDIIKEYTDVYPEIIERAGYSLEKVFGIQLKEIDKNDHLYILLSTLEPTDAGILGTTKDSPKLGLLMVL
LSIIFMNGNRSSEAVIWEVLRKLGLRPGIHHSLFGDVKKLITDEFVKQKYLDYARVPNSNPPEYEFFWGLRSYYE
TSKMKVLKFACKVQKKDPKEWAAQYREAMEADLKAAAEAAAEAKARAEIRARMGIGLGSENAAGPCNWDEADIGP
WAKARIQAGAEAKAKAQESGSASTGASTSTNNSASASASTSGGFSAGASLTATLTFGLFAGLGGAGASTSGSSGA
CGFSYK

TGGCCAACTTCTGAACAGGAAGCAGTTCGCTCGCGCCTAGGTTGGCGCGGGCTGGGAGGTGTTCCAGCCCTTTAA AGTGACCAGGGATGCACTGACAGAGCCCCTGGCTATCGTTGAGGGTTATAACTCCTATTTCAGCTTCAGCCGCAA CCGTAGCGGCTATTCTGGTGTAGCCACCTTCTGTAAGGACAATGCTACCCCAGTGGCTGCTGAAGAAGGCCTGAG TGGCCTGTTTGCCACCCAGAATGGGGATGTTGGTTGCTATGGAAACATGGATGAGTTTACCCAAGAGGAACTCCG GGCTCTGGATAGTGAGGGCAGGGCCCTCCTCACACAGCATAAGATCCGCACATGGGAAGGTAAGGAGAAGACCTT GACCCTAATCAACGTGTACTGCCCCCATGCGGACCCTGGGAGGCCTGAGCGGCTAGTCTTTAAGATGCGCTTCTA AGCCCACCGCCCCATTGACCACTGGGATGCAGTCAACCTGGAATGCTTTGAAGAGGACCCAGGGCGCAAGTGGAT GGACAGCTTGCTCAGTAACTTGGGGTGCCAGTCTGCCTCTCATGTAGGGCCCTTCATCGATAGCTACCGCTGCTT CCAACCAAAGCAGGAGGGGCCTTCACCTGCTGGTCAGCAGTCACTGGCGCCCCCCATCTCAACTATGGCTCCCG GCTTGACTATGTGCTGGGGGACAGGACCCTGGTCATAGACACCTTTCAGGCCTCTTTCCTGCTGCCTGAGGTGAT GGGCTCTGACCACTGCCCTGTGGGTGCAGTCTTGAGTGTCCTCTGTGCCTGCAAAACAGTGCCCACCTCTGTG CACCCGCTTCCTCCTGAGTTTGCAGGCACCCAGCTCAAGATCCTTCGCTTCCTAGTTCCTCTCGAACAAAGTCC TGTGTTGGAGCAGTCGACGCTGCAGCACAACAATCAAACCCGGGTACAGACATGCCAAAACAAAGCCCAAGTGCG CTCAACCAGGCCTCAGCCCAGTCAGGTTGGCTCTAGCAGAGGCCCAGAAAAACCTGAAGAGCTACTTTCAGCCCTC CCCTAGCTGTCCCCAAGCCTCTCCTGACATAGAGCTGCCTAGCCTACCACTGATGAGCGCCCTCATGACCCCGAA GACTCCAGAAGAGAGGCAGTGGCCAAAGTGGTGAAGGGGCCAGGCCAAGACTTCAGAAGCCCAAAGATGAGAAGGA GTTACGGACCTCATTCTGGAAGTCTGTGCTGGCGGGGCCCTTGCGCACACCCCTCTGTGGGGGCCCACAGGGAGCC ATGTGTGATGCGTACTGTGAAGAAGCCAGGACCCAACTTGGGCCGCCGCTTCTACATGTGTGCCAGGCCCCGGGG $t CCTCCCACTGACCCCTCCTCCCGGTGCAACTTCTTCCTCTGGAGCAGGCCCAGC \underline{ t TGA}$ t ACCAATGGAGGCCTGGGGACATCTGGCATGGTCACCCCTGCACATGATCTGAGGCCAGCTCCCCTTCCCTGAGCTGCCTCCTCCCT TGAGCTTCTTGTGCCTTAATCCTGTGACCCAGCCCCTTACACCACTTTCCACCTTCCTGTCCGAAGTACACGGAC

MLRVVSWNINGIRRPLQGVANQEPSNCAAVAVGRILDELDADIVCLQETKVTRDALTEPLAIVEGYNSYFSFSRN RSGYSGVATFCKDNATPVAAEEGLSGLFATQNGDVGCYGNMDEFTQEELRALDSEGRALLTQHKIRTWEGKEKTL TLINVYCPHADPGRPERLVFKMRFYRLLQIRAEALLAAGSHVIILGDLNTAHRPIDHWDAVNLECFEEDPGRKWM DSLLSNLGCQSASHVGPFIDSYRCFQPKQEGAFTCWSAVTGARHLNYGSRLDYVLGDRTLVIDTFQASFLLPEVM GSDHCPVGAVLSVSSVPAKQCPPLCTRFLPEFAGTQLKILRFLVPLEQSPVLEQSTLQHNNQTRVQTCQNKAQVR STRPQPSQVGSSRGQKNLKSYFQPSPSCPQASPDIELPSLPLMSALMTPKTPEEKAVAKVVKGQAKTSEAKDEKE LRTSFWKSVLAGPLRTPLCGGHREPCVMRTVKKPGPNLGRRFYMCARPRGPPTDPSSRCNFFLWSRPS

GCCACCGCCAGCAGGGAGGCGAGGGCTAGCGAGCCAAGCGGTGGGGACGCCGCTGCCTTCCTCTTTGCCTGTCT CGCCGCCTCCTAGACACGCTCCTCATCTACCGATCCTACCCTCCCCGCTCTTGCAAGCATTCACTCGGCCGGTC GCCTGCTGACCCTCCTTCGCCACAGGCTCGTAGCGGAGGCAGCAGCAGGCATGAAGACCCCCAACGCACAG GAAGCCGAAGGCAACAAACCAGGGCAGCTGCAGGACGGCCACTGGGTCTGCAAACATGACAAAGAAAAAAGTC TCCCAAAAGAAGCAGAGGCCGACCTTCATCCCAGCCCCGCAGGAACATCGTGGGCTGCAGAATTTCTCATGGA TGGAAGGAAGGAGATGAGCCCATCACGCAGTGGAAAGGAACCGTTCTGGATCAGGTGCCTATAAATCCCTCTCTT TATCTGGTGAAATATGATGGAATTGACTGTGTCTATGGACTGGAACTTCACAGAGATGAAAGGGTTTTGTCTCTT AAAATTCTTTCTGACAGGGTGGCATCATCTCACATTAGTGATGCCAAACCTTGCAAATACCATAATTGGCAAAGCA GTGGAACATATGTTTGAGGGAGAGCATGGTTCTAAGGATGAATGGAGGGGGATGGTCTTAGCTCAAGCACCTATC ATGAAAGCCTGGTTTTATATTACCTATGAGAAAGATCCTGTCTTGTACATGTACCAGCTTCTAGATGATTATAAG GAAGGTGACCTCCGCATCATGCCAGAATCCAGTGAGTCTCCTCCAACAGAGAGGGAGCCCAGGAGGAGTTGTAGAT GGCCTAATAGGTAAGCATGTGGAATATACCAAAGAAGATGGCTCCAAAAGGATCGGCATGGTCATTCACCAAGTG GAAGCCAAACCCTCTGTGTATTTCATCAAGTTTGATGATGATTTCCATATCTATGTCTACGATTTGGTGAAAAAG TCCTAACTGTTAGGGTAAAATTTGGCACATGTGTGGAAACAAATGTATAATTTGTAGACATGCAAAAAATGTTGC CTTTCAGTGTATTGAAAGCTTATGGAATCCCTGATAACTAAACATCTTTGCCAGCATTAACTGTTGTTTTGCTCT AAAAATACAAACTTGTGTGTACATG

FIGURE 6202

MKTPNAQEAEGQQTRAAAGRATGSANMTKKKVSQKKQRGRPSSQPRRNIVGCRISHGWKEGDEPITQWKGTVLDQ VPINPSLYLVKYDGIDCVYGLELHRDERVLSLKILSDRVASSHISDANLANTIIGKAVEHMFEGEHGSKDEWRGM VLAQAPIMKAWFYITYEKDPVLYMYQLLDDYKEGDLRIMPESSESPPTEREPGGVVDGLIGKHVEYTKEDGSKRI GMVIHQVEAKPSVYFIKFDDDFHIYVYDLVKKS

CCCAGCCACTTCTGCAGAGTTCCTAACCCCAGACAGCTCTACTGCACCACCCCAGCCCTTCCCCACAGCCCAAAG GAACTTAAGAGGGAGAGCACTGCGGGCATGCAGCCAGGATTTCCAGCATTGCTTCCAGGCTCCTAGGGGAAACTT AGGCACTAGCGCAGACTACATCCAGACATGGCTATAGGGAAAAGTTTGCCTTGTGGCACACTGGGTGTGTCTCTC TATCCTCTCCCCCAGCAGGCATGAAGACCCCCAACGCACAGGAAGCCGAAGGGCAACAAACCAGGGCAGC TGCAGGACGGGCCACTGGGTCTGCAAACATGACAAAGAAAAAGTCTCCCAAAAGAAGCAGAGAGGCCGACCTTC GTGGAAAGGAACCGTTCTGGATCAGGTGCCTATAAATCCCTCTCTTTATCTGGTGAAATATGATGGAATTGACTG TCACATTAGTGATGCCAACCTTGCAAATACCATAATTGGCAAAGCAGTGGAACACATGTTTGAGGGAGAGCATGG TTCTAAGGATGAATGGAGGGGGATGGTCTTAGCTCAAGCACCTATCATGAAAGCCTGGTTTTATATTACCTATGA CAGTGAGTCTCCTCCAACAGAGAGGGAGCCAGGAGGAGTTGTAGATGGCCTAATAGGTAAGCATGTGGAATATAC CAAAGAAGATGGCTCCAAAAGGATCGGCATGGTCATTCACCAAGTGGAAACCCAAACCCTCTGTGTATTTCATCAA GTTTGATGATGATTTCCATATCTATGTCTACGATTTGGTGAAAAAGTCCTAACTGTTAGGGTAAAATTTGGCACA TGTGTGGAAACAAATGTATAATTTGTAGACATGCAAAAAATGTTGCCTTTCAGTGTACTGAAAGCTTATGGAATC CCTGATAACTAAACATCTTTGCCAGCATTAACTGTTGTTTTTGCTCTAAAAAATTACAAATTTGTGAATACATGACA CTGTCAATTTCGGCTGTGAATAAAGTTCAGCTAGAATCATAATCAGTCATTTAAAAAATGGCACTGGATTTAGCTG GTCTGGTCTGGAGGGGCAGGGAAGGAACAAGAGATTGGCTGTCTTGGGGAGAGAGGAGGAGGAGGTGACTGCTTAG TCAGAAGGAAGACTAACAGAGGGAGAGTGAGATCTTGGGGGCTTAGAGGAAAATAGAATAAACTGAGTAGAGAGGA ACACAAAGAAGCTTAGAAGAGGGTCCAGAGTAAGGTGGAGAAGGATCAACCTGACAGGGATCTGGGAGAGGCTAA TTCAAAGAAGAAGACTGACAGAGGGAGTGAGAATACAGGAAAAGAGTTGTGGGGGTATGGGGCCCATGAGAGATC GGAAGGCCCAGGAAAATGTTGGACTTCTGGTAGTGTCCACATTGCTCTTCCTGGCTCTATGCACAAAGGAAGTGG CAACTGTCAAAGATGCCAGATGCATTGGAGGTTCACTAGAAGAGCATGTTGACAGGAATGACTCAGTCAAGTTAA TCAGGAGCCAAGTTTATGCCCATAAGGCTTTTCCTGTTTCAGGGAGTTAATGACACACTTGTCCAGCAGAAACCC AATGCTCAGCCTAAACACGCTAACATGGTGCCCCACATGTGCTGGGCTGTGGGCTGCCTCCTCACATTTGTCCTG CGCTAGATAAGCAATCTTGGTAGAGGATGGGTTAGTGGGGCTCTCAGAACTTAAGAGATGTGCCATCTTGCATTT GGAAAGTACTTTATCCAGAAAAATGAAATCTTACTGAACTCAGGTACAGCAGTCTCATCACTCCTATTCCTTCT GCTGGAATGTTTGTTTTCTATCTAGAGATGAGGGGCATCAGAGGACTGAGCCTAGTGTTTCTCTCGAG

GGTAGCAGGAGGCTGGAAGAAAGGACAGAAGTAGCTCTGGCTGTGATCGGGGATCTTACTGGGCCTGCTACTCCTG GGGCACCTAACAGTGGACACTTATGGCCGTCCCATCCTGGAAGTGCCAGAGAGTGTAACAGGACCTTGGAAAGGG GATGTGAATCTTCCCTGCACCTATGACCCCCTGCAAGGCTACACCCAAGTCTTGGTGAAGTGGCTGGTACAACGT GGCTCAGACCCTGTCACCATCTTTCTACGTGACTCTTCTGGAGACCATATCCAGCAGGCAAAGTACCAGGGCCGC TACACGTGTGAAGTCACCTGGCAGACTCCTGATGGCAACCAAGTCGTGAGAGATAAGATTACTGAGCTCCGTGTC CAGAAACTCTCTGTCTCCAAGCCCACAGTGACAACTGGCAGCGGTTATGGCTTCACGGTGCCCCAGGGAATGAGG ATTAGCCTTCAATGCCAGGCTCGGGGTTCTCCCCCATCAGTTATATTTGGTATAAGCAACAGACTAATAACCAG GAACCCATCAAAGTAGCAACCCTAAGTACCTTACTCTTCAAGCCTGCGGTGATAGCCGACTCAGGCTCCTATTTC TGCACTGCCAAGGGCCAGGTTGGCTCTGAGCAGCACACGCGACATTGTGAAGTTTGTGGTCAAAGACTCCTCAAAG CTACTCAAGACCAAGACTGAGGCACCTACAACCATGACATACCCCTTGAAAGCAACATCTACAGTGAAGCAGTCC GCCATCATCCTCATCTCCTTGTGCTGTATGGTGGTTTTTACCATGGCCTATATCATGCTCTGTCGGAAGACA TCCCAACAAGAGCATGTCTACGAAGCAGCCAGGGCACATGCCAGAGAGGCCAACGACTCTGGAGAAACCATGAGG GTGGCCATCTTCGCAAGTGGCTGCTCCAGTGATGAGCCAACTTCCCAGAATCTGGGCAACAACTACTCTGATGAG ATAATTGCCTAGTCAGTCCTTGCCTTCTGCATGGCCTTCTTCCCTGCTACCTCTTCCTGGATAGCCCAAAGTG TCCGCCTACCAACACTGGAGCCGCTGGGAGTCACTGGCTTTGCCCTGGAATTTGCCAGATGCATCTCAAGTAAGC CAGCTGCTGGATTTGGCTCTGGGCCCTTCTAGTATCTCTGCCGGGGGCTTCTGGTACTCCTCTAAATACCAGA GGGAAGATGCCCATAGCACTAGGACTTGGTCATCATGCCTACAGACACTATTCAACTTTGGCATCTTGCCACCAG AAGACCCGAGGGAGGCTCAGCTCTGCCAGCTCAGAGGACCAGCTATATCCAGGATCATTTCTCTTCTTCAGGGC CAGACAGCTTTTAATTGAAATTGTTATTTCACAGGCCAGGGTTCAGTTCTGCTCCTCCACTATAAGTCTAATGTT

MGILLGLLLGHLTVDTYGRPILEVPESVTGPWKGDVNLPCTYDPLQGYTQVLVKWLVQRGSDPVTIFLRDSSGD HIQQAKYQGRLHVSHKVPGDVSLQLSTLEMDDRSHYTCEVTWQTPDGNQVVRDKITELRVQKLSVSKPTVTTGSG YGFTVPQGMRISLQCQARGSPPISYIWYKQQTNNQEPIKVATLSTLLFKPAVIADSGSYFCTAKGQVGSEQHSDI VKFVVKDSSKLLKTKTEAPTTMTYPLKATSTVKQSWDWTTDMDGYLGETSAGPGKSLPVFAIILIISLCCMVVFT MAYIMLCRKTSQQEHVYEAARAHAREANDSGETMRVAIFASGCSSDEPTSQNLGNNYSDEPCIGQEYQIIAQING NYARLLDTVPLDYEFLATEGKSVC

CAGTAGTGCTAGCAGCTTCGCGGTTCGGTCCTCGGACCCGGCAGCCACCACTGGTGCTGAGCTGCTAGGAAGCCC GCAGATCGCCTAGGAAAGTTTTTCATTGGTGGGCTTAATACGGAAACAAATAAGAAAGCTCTTGAAGCAGTATTT GGCAAATATGGACAAATAGTGGAAGTACACTTGATGAAAGACTGTGAAACCAACAAATCAAGAGGATTTGCTTTT ATCACCTTTGAAAGACCAGCAGACGCTAAGGATGCAGCCAGAGACATGAATGGAAAGTCATTAGATGGAAAAGCC ATCAAGGTGGAACAAGCCACCAAACCGTCATTTGAAAGTGGTAGACGTGGACCGCCTCCACCTCCAAGAAGTAGA ATGGATGACTGGTGGATATTCCATGAATTTTAACATGAGTTCTTCCAGGGGACCACTCCCAGTAAAAAGAGGACC ACCACCAAGAAGTGGGGGTCTTCCTCCTAAGAGATCTGCACCTTCAGGACCAGTTCGCAGTAGCAGTGGAATGGG AGGAAGAGCTCCTGTATCACGTGGAAGAGATAGTTACCGAGGTCCACCTCGAAGGGAATCGCTGCCCTCTTGTAG AGAGCTCCACCTACACGAGGGCGCCCCCATCTTATGGTGGAAGCAGTCGCTATGATGATTACAGCAGCTCACGTG ACGGATATGGTGGAAGTCGAGACAGTTACTCAAGCAGTCGAAGTGATCTCTACTCAAGTGGTCGTGATCAGGTTG GCAGACAAGAAAGAGGGCTTCCCCCTTCTATGGAAAGGGGGTACCCTCCTCCACGTGATTCCTACAGCAGTTCAA GCCGTGGAACACCAAGAGGTGGTGGCCGTGGAGGAAGCCGATCTGATAGAGGGGGAGGCAGAAGCAGATACTAGA AACAAACAAAACTTTGTACCAAAATCCCAGTTCAAAGAAACAAAAAGTGGAAACTATTCTATCATAACTACCCAA GAACTACTAAAAGGAAAAATTGTGTTACCTTTTTTAAAATTCCCTGTTAAGCTCCCCTCCATAATTTTTATGTTC TTGTGAGGAAAAAAGTAAAACATGTTTAATTTTATTTGACTTTTGCATTGCTTTTCAACAAGCAAATGTTAAAT GTGTTAAGACTTATACTAGTGTTGTAACTTTCCAAGTAAAAGTATCCCTAAAGGCCACTTCCTATCTGATTTTTC CCAGTAAATGAGGCAGCAATTCTAAGATCTTCCACAAAACATCTAGCCATCTAAAATGGAGAGATGAATCATTC TACCTACACAACAAGCTAGCTATTAGAGGGTGGTTGGGATATGCTACTCATAAGATTTCAGGGTGTCTTCCAAC TGAAATCTCAATGTTCTTAGTATGAAAAACCTGAAATCGCATGCCTATTCACCCAGTAAACCCAAAAAAAGCAAAT GGATAATGCTGGCCATTCTGCCTTTCTGACATTTCCTTGGGAATCTGCAAGAACCTCCCCTTTCCCCTCCCCAA

6721/6881 FIGURE 6207A

GGCCAGCCGAATCCAAGCCGTGTGTACTGCGTGCTCAGCACTGCCCGACAGTCCTAGCTAAACTTCGCCAACTCC GCTGCCTTTGCCGCCACC<u>ATG</u>CCCAAAACGATCAGTGTGCGTGTGACCACCATGGATGCAGAGCTGGAGTTTGCC ATCCAGCCCAACACCACCGGGAAGCAGCTATTTGACCAGGTGGTGAAAACTATTGGCTTGAGGGAAGTTTGGTTC TTTGGTCTGCAGTACCAGGACACTAAAGGTTTCTCCACCTGGCTGAAACTCAATAAGAAGGTGACTGCCCAGGAT GTGCGGAAGGAAAGCCCCCTGCTCTTTAAGTTCCGTGCCAAGTTCTACCCTGAGGATGTGTCCGAGGAATTGATT CAGGACATCACTCAGCGCCTGTTCTTTCTGCAAGTGAAAGAGGGCATTCTCAATGATGATATTTACTGCCCGCCT GAGACCGCTGTGCTGGCCTCGTATGCTGTCCAGTCTAAGTATGGCGACTTCAATAAGGAAGTGCATAAGTCT GGCTACCTGGCCGGAGACAAGTTGCTCCCGCAGAGAGTCCTGGAACAGCACAAACTCAACAAGGACCAGTGGGAG GAGCGGATCCAGGTGTGGCATGAGGAACACCGTGGCATGCTCAGGGAGGATGCTGTCCTGGAATATCTGAAGATT GCTCAAGATCTGGAGATGTATGGTGTGAACTACTTCAGCATCAAGAACAAGAAAGGCTCAGAGCTGTGGCTGGGG GTGGATGCCCTGGGTCTCAACATCTATGAGCAGAATGACAGACTAACTCCCAAGATAGGCTTCCCCTGGAGTGAA ATCAGGAACATCTCTTTCAATGATAAGAAATTTGTCATCAAGCCCATTGACAAAAAAAGCCCCGGACTTCGTCTTC TATGCTCCCCGGCTGCGGATTAACAAGCGGATCTTGGCCTTGTGCATGGGGAACCATGAACTATACATGCGCCGT CGCAAGCCTGATACCATTGAGGTGCAGCAGATGAAGGCACAGGCCCGGGAGGAGAAGCACCAGAAGCAGATGGAG CGTGCTATGCTGGAAAATGAGAAGAAGAAGCGTGAAATGGCAGAGAAGGAGAAAGAGAAGATTGAACGGGAGAAG GAGGAGCTGATGGAGAGGCTGAAGCAGATCGAGGAACAGACTAAGAAGGCTCAGCAAGAACTGGAAGAACAGACC CGTAGGGCTCTGGAACTTGAGCAGGAACGGAAGCGTGCCCAGAGCGAGGCTGAAAAGCTGGCCAAGGAGCGTCAA GAAGCTGAAGAGGCCAAGGAGGCCTTGCTGCAGGCCTCCCGGGACCAGAAAAAGACTCAGGAACAGCTGGCCTTG GAAATGGCAGAGCTGACAGCTCGAATCTCCCAGCTGGAGATGGCCCGACAGAAGAAGGAGAGTGAGGCTGTGGAG TGGCAGCAGAAGGCCCAGATGGTACAGGAAGACTTGGAGAAGACCCGTGCTGAGCTGAAGACTGCCATGAGTACA CCTCATGTGGCAGAGCCTGCTGAGAATGAGCAGGATGAGCAGGATGAGAATGGGGCAGAGGCTAGTGCTGACCTA CGGGCTGATGCTATGGCCAAGGACCGCAGTGAGGAGGAACGTACCACTGAGGCAGAGAAGAATGAGCGTGTGCAG AAGCACCTGAAGGCCCTCACTTCGGAGCTGGCCAATGCCAGAGATGAGTCCAAGAAGACTGCCAATGACATGATC CATGCTGAGAACATGCGACTGGGCCGAGACAAATACAAGACCCTGCGCCAGATCCGGCAGGGCAACACCAAGCAG $\tt CGCATTGACGAATTTGAGTCTATG{\color{red}{\textbf{TAA}}} \\ TGGGCACCCAGCCTCTAGGGACCCCTCCTCCTTTTTCCTTGTCCCCA$ ATGGTGCCAATGGAACCTCCTTTCTCTCTGTTCCATTGAATCTGTATGGCTAGAATATCCTACTTCTCCAGC CTAGAGGTACTTTCCACTTGATTTTGCAAATGCCCTTACACTTACTGTTGTCCTATGGGAGTCAAGTGTGGAGTA GGTTGGAAGCTAGCTCCCCTCCTCCCCTACCACTGTCTTCTTCAGGGTCCTGAGATTTACACGGTTGGAGTGT TATGCGGTCTAGGGAATGAGACAGGACCTAGGATATCTTCTCCAGGATGTCAACTGACCTAAAATTTGCCCTCCC ATCCCGTTTAGAGTTATTTAGGCTTTGTAACGATTGGGGGGATAAAAAGATGTTCAGTCATTTTTGTTTCTACCTC CCAGATCGGATCTGTTGCAAACTCAGCCTCAATAAGCCTTGTCGTTGACTTTAGGGACTCAATTTCTCCCCAGGG TGGATGGGGGAAATGGTGCCTTCAAGACCTTCACCAAACATACTAGAAGGGCATTGGCCATTCTATTGTGGCAAG GCTGAGTAGAAGATCCTACCCCAATTCCTTGTAGGAGTATAGGCCGGTCTAAAGTGAGCTCTATGGGCAGATCTA GTTCACACCTAGCGTCAGTATTTTCCCTGCTAGGGGTTTTAGGTCTCTTCCCCTCTCAGAGCTACTTGGGCCATA AAAAGCTGAGTATGGTGAGAAGCCTGTGCCCTGATCCAAGTTTACTCAACCCTCTCAGGTGACCAAAATCCCC TTCTCATCACTCCCCTCCAAAGAGGTGACTGGGCCCTGCCTCTGTTTGACAAACCTCTAACCCAGGTCTTGACAC CAGCTGTTCTGTCCCTTGGAGCTGTAAACCAGAGAGCTGCTGGGGGATTCTGGCCTAGTCCCTTCCACACCCCCAC CCCTTGCTCTCAACCCAGGAGCATCCACCTCCTTCTCTGTCTCATGTGTGCTCTTCTTCTTCTACAGTATTATG TACTCTACTGATATCTAAATATTGATTTCTGCCTTCCTTGCTAATGCACCATTAGAAGATATTAGTCTTGGGGCA GGATGATTTTGGCCTCATTACTTTACCACCCCCACACCTGGAAAGCATATACTATATTACAAAATGACATTTTGC CAAAATTATTAATATAAGAAGCTTTCAGTATTAGTGATGTCATCTGTCACTATAGGTCATACAATCCATTCTTAA AGTACTTGTTATTTGTTTTATTATTACTGTTTGTCTTCTCCCCAGGGTTCAGTCCTCAAGGGGCCATCCTGTCC CACCATGCAGTGCCCCTAGCTTAGAGCCTCCCTCAATTCCCCCTGGCCACCACCCCCCACTCTGTGCCTGACCTT

6722/6881 FIGURE 6207B

GAGGAGTCTTGTGTGCATTGCTGTGAATTAGCTCACTTGGTGATATGTCCTATATTGGCTAAATTGAAACCTGGA ATTGTGGGGCAATCTATTAATAGCTGCCTTAAAGTCAGTAACTTACCCTTAGGGAGGCTGGGGGAAAAGGTTAGA TTTTGTATTCAGGGGTTTTTTGTGTACTTTTTGGGTTTTTTAAAAATTGTTTTTGGAGGGGTTTATGCTCAATCC ATGTTCTATTTCAGTGCCAATAAAATTTAGGAAGACTTC

MPKTISVRVTTMDAELEFAIQPNTTGKQLFDQVVKTIGLREVWFFGLQYQDTKGFSTWLKLNKKVTAQDVRKESP LLFKFRAKFYPEDVSEELIQDITQRLFFLQVKEGILNDDIYCPPETAVLLASYAVQSKYGDFNKEVHKSGYLAGD KLLPQRVLEQHKLNKDQWEERIQVWHEEHRGMLREDAVLEYLKIAQDLEMYGVNYFSIKNKKGSELWLGVDALGL NIYEQNDRLTPKIGFPWSEIRNISFNDKKFVIKPIDKKAPDFVFYAPRLRINKRILALCMGNHELYMRRRKPDTI EVQQMKAQAREEKHQKQMERAMLENEKKKREMAEKEKEKIEREKEELMERLKQIEEQTKKAQQELEEQTRRALEL EQERKRAQSEAEKLAKERQEAEEAKEALLQASRDQKKTQEQLALEMAELTARISQLEMARQKKESEAVEWQQKAQ MVQEDLEKTRAELKTAMSTPHVAEPAENEQDEQDENGAEASADLRADAMAKDRSEEERTTEAEKNERVQKHLKAL TSELANARDESKKTANDMIHAENMRLGRDKYKTLRQIRQGNTKQRIDEFESM

GTGCGGAGCGGCGCGCACAGAGCCTGTTGTTGAGCTCAGT<u>ATG</u>TCGTGGGAATCCGGGGCCGGGCCAGGTCTAG GTTCCCAGGGGATGGATCTCGTGTGGAGTGCGTGGTACGGAAAGTGCGTTAAAGGGAAAGGGTCGTTGCCACTCT CGGCCCACGGCATCGTGGTCGCCTGGCTCAGCAGGGCCGAGTGGACCAGGTGACGGTTTATCTGTTCTGTGACG ACCATAAGTTGCAGCGGTACGCGCTTAACCGCATCACGGTGTGGAGGAGCAGGTCAGGCAACGAACTCCCTCTGG CAGTGGCTTCTACTGCTGACCTGATACGCTGTAAGCTCTTGGATGTAACTGGTGGCTTGGGCACTGATGAACTTA GACTGCTCTATGGCATGGCATTGGTCAGGTTTGTGAATCTTATCTCAGAGAGGAAGACAAAGTTTGCCAAGGTCC CCCTCAAGTGTCTGGCTCAAGAGGTAAATATTCCGGATTGGATTGTTGACCTTCGCCATGAGTTGACCCACAAGA AAATGCCCCATATAAATGACTGCCGCAGAGGCTGCTACTTTGTCCTGGATTGGCTCCAGAAGACCTATTGGTGCC GCCAACTGGAGAACAGCCTGAGAGAGACCTGGGAGTTGGAGGAGTTCAGGGGAAGGGATAGAGGAAGAGGATCAAG AGGAAGATAAGAACATTGTTGTTGATGACATCACAGAACAGAACCAGAGCCTCAGGATGATGGGAAAAGTACGG AGTCAGATGTAAAGGCCGATGGAGACAGCAAAGGCAGCGAAGAGGTGGATTCTCATTGCAAAAAAGGCCCTGAGTC ATAAAGAGCTATATGAAAGAGCCCGAGAACTGCTGGTATCATACGAAGAGGAGCAGTTTACGGTGCTGGAGAAAT TTAGGTATTTACCTAAGGCCATTAAGGCGTGGAATAACCCGTCCCCACGTGTAGAATGTGTCCTGGCAGAGCTCA AGGGCGTTACATGCGAGAACAGGGAGGCTGTGCTGGATGCTTTTCTGGATGATGGCTTCCTTGTCCCCACATTTG AACAGTTGGCAGCTTTGCAGATAGAATATGAAGATGGTCAGACTGAGGTCCAGAGAGGGGAAGGTACTGACCCAA AGTCACACAAAAACGTGGACTTGAATGACGTCCTGGTGCCAAAGCCGTTCTCTCAGTTCTGGCAGCCCCTGCTCA GGGGCCTGCACTCCCAGAACTTCACGCAGGCCCTATTGGAGAGGATGCTCTCTGAACTGCCAGCCTTGGGGATCA GCGGGATCCGGCCTACCTACATCCTCAGATGGACCGTTGAACTGATCGTGGCCAACACCCAAGACTGGACGGAATG CTCGCCGATTTTCTGCAGGCCAGTGGGAAGCAAGAAGGGGCTGGAGGCTGTTCAACTGCTCCGCCTCCCTTGACT GGCCCCGGATGGTTGAGTCCTGCTTGGGCTCACCTTGCTGGGCCCACCCCCAACTCCTTCGGATCATCTTCAAAG CCATGGGGCAGGCCTGCCAGACGAGGAGCAGGAGAAGCTGCTGCGCATCTGTTCCATTTATACCCAGAGTGGAG AAAACAGCCTGGTGCAGGAGGGCTCTGAGGCCTCCCCCATTGGGAAGTCTCCATATACACTAGACAGCCTGTATT GGAGCGTCAAGCCAGCTCCAGCTTCGGGTCTGAAGCAAAGGCCCAGCAACAGGAGCAGCAGCAGTGTTA ATGATGTCAAGGAAGAGGAGGAGGAGAAAGAGGTCTTGCCAGACCAGGTAGAGGAGGAGGAAGAAAATGATG CTACAGGGCAAGAGTCCCCCACTGCCGAGAATGCTAGGCTTCTGGCCCAGAAAAGAGGGGCTTTGCAGGGCTCTG CATGGCAGGTTAGCTCAGAAGACGTGCGATGGGACACATTTCCCCTAGGCCGAATGCCAGGTCAGACCGAGGACC CAGCAGAGCTCATGCTGGAGAATTATGACACCATGTATCTTTTGGACCAGCCTGTGCTAGAGCAGCGGCTGGAAC CCTCAACATGCAAGACTGACACCTTGGGCCTGAGCTGTGGTGTCGGCAGCTGCCAGCAACAGCAGCAGCAGCA GCAACTTCGAGGGCCTTCTCTGGAGCCAGGGGCAGCTGCATGGGCTCAAAACTGGCCTGCAGCTCTTCTGATGGC CATCCCTGGTGCAAGTGTTCATCCAGCCGTGCCAGGGCAACAGCCCACCCCCTAGTACAACTGATGCTCCCTGAG ACAACCTGGGAGACAGCCTGGATCAGCCACATCAACTCAGTTGTCCACCACAGGGGAATTTTGAATGTCTTTTGT TTTTGTTTTGTAAAAATAATAAACAGGCAACTGT

MSWESGAGPGLGSQGMDLVWSAWYGKCVKGKGSLPLSAHGIVVAWLSRAEWDQVTVYLFCDDHKLQRYALNRITV WRSRSGNELPLAVASTADLIRCKLLDVTGGLGTDELRLLYGMALVRFVNLISERKTKFAKVPLKCLAQEVNIPDW IVDLRHELTHKKMPHINDCRRGCYFVLDWLQKTYWCRQLENSLRETWELEEFREGIEEEDQEEDKNIVVDDITEQ KPEPQDDGKSTESDVKADGDSKGSEEVDSHCKKALSHKELYERARELLVSYEEEQFTVLEKFRYLPKAIKAWNNP SPRVECVLAELKGVTCENREAVLDAFLDDGFLVPTFEQLAALQIEYEDGQTEVQRGEGTDPKSHKNVDLNDVLVP KPFSQFWQPLLRGLHSQNFTQALLERMLSELPALGISGIRPTYILRWTVELIVANTKTGRNARRFSAGQWEARRG WRLFNCSASLDWPRMVESCLGSPCWASPQLLRIIFKAMGQGLPDEEQEKLLRICSIYTQSGENSLVQEGSEASPI GKSPYTLDSLYWSVKPASSSFGSEAKAQQQEEQGSVNDVKEEEKEEKEVLPDQVEEEEENDDQEEEEEDDDDD EEEDRMEVGPFSTGQESPTAENARLLAQKRGALQGSAWQVSSEDVRWDTFPLGRMPGQTEDPAELMLENYDTMYL LDQPVLEQRLEPSTCKTDTLGLSCGVGSGNCSNSSSSNFEGLLWSQGQLHGLKTGLQLF

ATGAACAGCCCGGACCTCCGTCGTCCCGCGGCGACCAAAATCTCCGCTGGCCGCACCGCTGTGACTACTCCGGAC
TCGCCGGCAGAGTTTGCCCGCCGGGGAGGGTGGCCGATTGGCGGAGCGCACTCCTGCTGTTTCTCCCACCATCTC
GTGGATGTCGTCCCTCGGGTGGTGAGAGACCTTTGCAGTGGGCTGGAGCGCCCCTTTGCGGAGAAGCACACGAAGT
TGGAAATTGACCGGAGAATTGAGTTGCCGGGGAACAGAGCCCCGGCCGCCGCCGCCGCGGATGTTCCCGCAGAGCC
GGCACCCGACGCCGCACCAGGCTGCAGGCCAGCCCTTCAAGTTCAGTATCGCGGAGTCCCTGGACCGGATTAAAG
AGGAATTCCAGTTCCTGCAGGCGCAGTATCACAGCCTTAAATTGGAATGAACATCAACAACAGGTGGCCCAGGCT
GTCGAACGTGCCAAACAGGTGACCATGGCAGAGTTGAATGCCATCATCGGGCAGCAGTTGCAAGCTCAGCAT
CTTTCTTATGGCCACGGACCCCCAGTTCCCCTTACGCCTCACCCTTCGGGACTTCAGCCTCCTGGAATCCCGCCC
CTCGGGGGCAGTGCCGGTCTTCTTGCACTGTCTAGTGCTCTGAGTGGGCAATCTCACTTGGCAATAAAAGATGAC
AAGAAGCATCAAGATGCAGAGCACCACAGAGATGAGAGGCCCGGCAAGCCAGATTAG

MNSPDLRRPAATKISAGRTAVTTPDSPAEFARRGGWPIGGAHSCCFSHHLVDVVPRVVRELCSGLERPLRRSTRS WKLTGELSCRGTEPRPPPARCSRRAGTRRRTRLQASPSSSVSRSPWTGLKRNSSSCRRSITALNWNEHQQQVAQA VERAKQVTMAELNAIIGQQQLQAQHLSYGHGPPVPLTPHPSGLQPPGIPPLGGSAGLLALSSALSGQSHLAIKDD KKHQDAEHHRDERPGKPD

PCT/US2003/028547

6729/6881 FIGURE 6214A

 $\verb|CTGATCTCGGGGGATTCGGGTGCGGAGCCCTTGGCCTGGAGGCGATATGGGTGGTCCGTGGCCCGGTTCAGTCGCT|\\$ TGCAGCAGCCCGGGGAACAGGCCTGTCTGGCCCTGAGGGAGTCCCCTTTCTGAAGCTGTGGTGCTTGGACGACCT GCTCTCTACATTGCTGGGCACCTGTAGGTGTCCCTCGAGAGCTCAGTTTTGAGGTTCAAGTCAGTGTGGCCATGA AGGGGCTGCCTATTGGGCTGATGCTGTGACCCTGGAGTCTGCCTCTCCTGCCAGTCCCCTGCCCGGAACATGTG GCTGCGGCTTGGCCCGCCTCGCTGTCCCTGAGCCCCAAGCCCACGGTTGGCAGGAGCCTGTGCCTCACCCTGTG GGGTGCCCGAGTACCACTGCCCAGTGAGATCCTGGGGCCTGTGGACCAATACCTGGGGGTGCCCTACGCAGCTCC $\verb|CCCGATCGGCGAGAAACGTTTCCTGCCCCCTGAACCACCCCCATCCTGGTCGGGCATCCGGAACGCCACACACTT| \\$ TCCCCCAGTGTGCCCCCAGAACATCCACACAGCTGTGCCCGAAGTCATGCTGCCGGTCTGGTTCACTGCCAACTT GGATATCGTCGCTACTTACATCCAGGAGCCCAACGAAGACTGTCTCTACCTGAACGTCTATGTGCCGACGGAGGA TGGATCCGGCGCTAAGAAACAGGGCGAGGACTTAGCGGATAATGACGGGGATGAAGATGAAGACATCCGGGACAG CATCCCCGCCAGTTATGGCAATGTCATGATCATCACCCTCAACTATCGGGTTGGAGTGCTAGGTTTCCTGAGTAC TGGAGATCAGGCTGCCAAGGGCAACTATGGGCTCCTTGACCAGATCCAGGCCCTCCGCTGGGTGAGCGAGAATAT TGCCTTCTTCGGGGGAGACCCCCGCCGGATCACTGTCTTTGGCTCGGGCATTGGTGCATCCTGCGTCAGCCTCCT CACGTTGTCACATCACTCAGAGGGACTTTTCCAGAGAGCCATCATCCAAAGTGGCTCTGCTCTGTCCAGCTGGGC. TGTGAACTACCAACCAGTGAAGTACACCAGCCTGCTGGCAGACAAAGTGGGCTGTAATGTGCTGGACACCGTGGA GGCCTTTGGCCCTGTGATTGATGGTGATGTCATTCCTGATGACCCTGAGATCCTCATGGAGCAGGGCGAGTTCCT CAACTATGACATCATGCTAGGTGTCAACCAGGGCGAGGGTCTCAAGTTTGTGGAAGGGGTGGTGGACCCTGAGGA TGGTGTCTCTGGCACTGACTTTGACTATTCCGTCTCCAATTTTGTGGACAATCTGTATGGCTATCCTGAGGGTAA GGACACCCTGCGAGAGACCATCAAGTTCATGTATACAGACTGGGCAGACCGTGACAACCCTGAGACCCGCCGTAA AACACTGGTGGCACTCTTCACTGACCACCAGTGGGTGGAGCCCTCAGTGGTGACAGCCGATCTGCATGCCCGCTA CGGCTCGCCTACCTCTACGCCTTCTATCATCACTGCCAGAGCCTCATGAAGCCTGCTTGGTCAGATGCAGC TCATGGGGATGAAGTACCCTATGTTTTTGGGGTTCCTATGGTAGGCCCCACTGACCTTTTCCCCTGCAACTTCTC CAAGAATGATGTTATGCTCAGTGCTGTCGTCATGACCTATTGGACCAACTTTGCCAAGACTGGGGATCCCAACAA GCCGGTCCCCAGGACACCAAGTTCATTCACACCAAGGCCAACCGCTTTGAGGAAGTGGCCTGGTCCAAATACAA TCCCCGAGACCAGCTCTACCTTCACATCGGGCTGAAACCAAGGGTCCGAGATCATTACCGGGCCACTAAGGTGGC CTTTTGGAAACATCTGGTGCCCCACCTATACAACCTGCATGACATGTTCCACTATACGTCCACCACCACCAAAGT GCCGCCTCCGGATACCACCCACAGCTCCCACATCACCCGCAGGCCCAATGGCAAGACCTGGAGCACCAAGCGGCC AGCCATCTCACCTGCCTACAGCAACGAGAATGCCCAGGGGTCCTGGAACGGGGACCAGGATGCAGGGCCACTCCT CGTTCTGGCCTTCGCTGCCCTCTACTACCGTAAGGACAAACGGCGCCAGGAGCCCTGCGGCAGCCTAGCCCTCA CCACGAGTGTGAGGCCGGTCCCCCCATGACACGCTGCGCCTCACTGCATTGCCCGACTACACCCTGACCCTGCG GCGCTCCCCGGATGACATCCCACTCATGACCCCCAACACCATCACTATGATCCCCAACTCCCTGGTAGGGCTGCA GACATTGCACCCCTATAACACCTTTGCCGCAGGGTTCAACAGTACCGGGCTGCCCCACTCACACTCCACTACCCG ACCTGCACAAACATAGACAGATGTGGACATGCACCCGCATGTACAAAAACACAAATACGGAAGTAAACCTGAACA AACCCTTTAAATGGGGACGCAGATGAGTCCTCGGTAAACCGAGGACCCATGAAACAGCAGCTGAAGCCAGCTCCC TGAATCTGACCACAGACACTCCTGGGGGGCCTGAAAGCAACAGCTGGACACCCCCTTGGTGCTCGCCTTCGGCCT CTCTTGGAACTGCACCACCGACCAACTCCAGACTTGGGAGCTTTAAAGAGCAGGATAGCTCTTCCTCCCCAGGAC TTGGTCTTTTTCTGGGTCTTGTTTGTTGATTTTTCTTTTTTAATTTTGGAACAAATGCTTTTCCAACCCATGA GTGCTAAGAGCCTCTGGAAGGGAGGGCTTCAGGCCCGAAGGTCTCTCTGGCTCTAGGACCCCCAGTGCTCACACA ATCAGACCAAGGAACAAGACCCCCAGGAAGGAAACAGATTTAAGCAAGACCATGGGGTGGAAGGAGAAAGGGGCT CCTGCAGGGTGACCTGCTTCCCCAAAGGCCAACAGCATTGGCCTGGCCAGACCAGGTGACCTTAGATTTGGTGAA

6730/6881 FIGURE 6214B

MWLRLGPPSLSLSPKPTVGRSLCLTLWFLSLALRASTQAPAPTVNTHFGKLRGARVPLPSEILGPVDQYLGVPYA
APPIGEKRFLPPEPPPSWSGIRNATHFPPVCPQNIHTAVPEVMLPVWFTANLDIVATYIQEPNEDCLYLNVYVPT
EDGSGAKKQGEDLADNDGDEDEDIRDSGAKPVMVYIHGGSYMEGTGNMIDGSIPASYGNVIVITLNYRVGVLGFL
STGDQAAKGNYGLLDQIQALRWVSENIAFFGGDPRRITVFGSGIGASCVSLLTLSHHSEGLFQRAIIQSGSALSS
WAVNYQPVKYTSLLADKVGCNVLDTVDMVDCLRQKSAKELVEQDIQPARYHVAFGPVIDGDVIPDDPEILMEQGE
FLNYDIMLGVNQGEGLKFVEGVVDPEDGVSGTDFDYSVSNFVDNLYGYPEGKDTLRETIKFMYTDWADRDNPETR
RKTLVALFTDHQWVEPSVVTADLHARYGSPTYFYAFYHHCQSLMKPAWSDAAHGDEVPYVFGVPMVGPTDLFPCN
FSKNDVMLSAVVMTYWTNFAKTGDPNKPVPQDTKFIHTKANRFEEVAWSKYNPRDQLYLHIGLKPRVRDHYRATK
VAFWKHLVPHLYNLHDMFHYTSTTTKVPPPDTTHSSHITRRPNGKTWSTKRPAISPAYSNENAQGSWNGDQDAGP
LLVENPRDYSTELSVTIAVGASLLFLNVLAFAALYYRKDKRQEPLRQPSPQRGAGAPELGAAPEEELAALQLGP
THHECEAGPPHDTLRLTALPDYTLTLRRSPDDIPLMTPNTITMIPNSLVGLQTLHPYNTFAAGFNSTGLPHSHST

CTCTGGGAAAGGGCAGCAGCAGCCAGGTGTGGCAGTGACAGGGAGGTGTGAATGAGGCAGG<u>ATG</u>AACTGGACAGG TTTGTACACCTTGCTCAGTGGCGTGAACCGGCATTCTACTGCCATTGGCCGAGTATGGCTCTCGGTCATCTTCAT ACTCCAGCCTGGCTGCAACAGCGTTTGCTATGACCAATTCTTCCCCATCTCCCATGTGCGGCTGTGGTCCCTGCA GCTCATCCTAGTTTCCACCCCAGCTCTCCTCGTGGCCATGCACGTGGCTCACCAGCAACACATAGAGAAAAAAT GCTACGGCTTGAGGGCCATGGGGACCCCCTACACCTGGAGGAGGTGAAGAGGCACAAGGTCCACATCTCAGGGAC GCTCTACCCTGGCTATGCCATGGTGCGGCTGGTCAAGTGCGACGTCTACCCCTGCCCCAACACACGTGGACTGCTT CGTGTCCCGCCCCACCGAGAAAACCGTCTTCACCGTCTTCATGCTAGCTGCCTCTGGCATCTGCATCATCCTCAA TGTGGCCGAGGTGGTGTACCTCATCATCCGGGCCTGTGCCCGCCGAGCCCAGCGCCGCTCCAATCCACCTTCCCG CTCGGCCTGCTGATGCCACATACCAGGCAACCTCCCATCCCACCCCGACCCTGCCCTGGGCGAGCCCTCCTTC GAGATGGGATGCTCCGACAGCGTCTCCAATTATGAAACTAATCTTAACCCTGTGCTGTCAGATACCCTGTTTCTG GGGAGTTAGGGAGAGAGCAGCCAGATAAGTTGGAGCAGGGGTTGGTCAAGGCCACCTCTGCCTCTAGTCCCC AAGGCCTCTCTCTGCCTGAAATGTTACACATTAAACAGGATTTTACAGT

MNWTGLYTLLSGVNRHSTAIGRVWLSVIFIFRIMVLVVAAESVWGDEKSSFICNTLQPGCNSVCYDQFFPISHVR LWSLQLILVSTPALLVAMHVAHQQHIEKKMLRLEGHGDPLHLEEVKRHKVHISGTLWWTYVISVVFRLLFEAVFM YVFYLLYPGYAMVRLVKCDVYPCPNTVDCFVSRPTEKTVFTVFMLAASGICIILNVAEVVYLIIRACARRAQRRS NPPSRKGSGFGHRLSPEYKQNEINKLLSEQDGSLKDILRRSPGTGAGLAEKSDRCSAC

 ${\tt MNWTGLYTLLSGVNRHSTAIGRVWLSVIFIFRIMVLVVAAESVWGDEKSSFICNTLQPGCNSVCYDQFFPISHVRLWSLQLILVSTPALLVAMHVAHQQHIEKKMPRPLSA}$

TAATTCTAAATGGTGGTAGGAGGAGAACAGGCATTGCTTTCACAGCCCCTGGGGGCCTACCTCAGTTTGCTATAG ATAGCAGTCTTTTTTTTTTTGGAGACAGAGTTTCCCTCTTGTTGCCCAGGCTAGAGTGCAATGGCATGGTCTTGG CTCACTGCAACCTCCACCTCCCGGGTTCAAGCGAGTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGTG CTTGCCACCATGCCCGGCTAATTTTTGTATTTTTAGTAGAGATGGGGTTACACCATGTTGGCCAGGCTGGTCTCG AACTCCTGACCTCAGGTGATCCACCAGCCTCGGCCTCCCAATTTTGTATTTTATTAGAGACTGAGTTTGACCAC GTTGGTCAGGCTGTTCTTGAACTCCTGACCTCAGATAATCTGCCCGCCTCGGTTTCCCAAAGTGCTGGGATTACT GGCGTGAGCCACCAAGCCCGGCCCAGATAGCAATCTTTAGGACTGCTGGTATCCATTAAATGTAACCTCAAGGTC TTTATTTTTGAATCTTGAGCAAACTCAGTCTCTATACTTAATCTAGGAGTTAAGTAAATGCCACCGTCTGACTGG CCAGTCTGATTGACTATGTTTGTTGGAGGGAAGTCAATGAAGGCTAGGCATTATCACATAAAATAGTTGTGAATC CAAATACTTCATGGCTCATGCAATCCTGGGGTTGTTTTGGTTATGGTGTTAAAATGCCAAAACTGGATAGTTTGG TTGTTTCTGTTTTTGTTTTTCTTTTTCTTTTTTGAGACAGAGTTTTGCTCTTGTCGCCCAGGCTGGAG TGCAGTGGTGCAATCTTGGCTCCCTGCAACCTCCGCCTCCCAGGTTCAAGCGATTCTCCTGCCTCAGCCTCCTGA GTAGCTGGGATTACAGGCATGCGCCACCACTTTTGGGGTTATCCACTAGAGTTCTAAACAGACTTAGTCACCCAC GCTTCCAACAATGGCTCTGTTACAGTGTTGCTCTTTTTTCTCTTTTAAGACCCCAACAACAACTGAACGCTTTGG ${\tt TCAGGCTGCTACAATGGAAGGAATTGGGGGCAATTGGTGGAACTCCTCCTGCATTCAACCGTGCAGCTCCTGGAGC}$ TGAATTTGCCCCAAACAAACGTCGCCGATACTAATAAGTTGCAGTGTCTAGTTTCTCAAAAACCCTTAAAAGAAGG TATATTGTTTAATCAGTTCTGTGTGGTGCATTCCTGAAGTCTCTAATGTGACTGTTGAGGGCCTGGGGAAACCAT TTGCTTGCCCCGCCCCCGAGACGGAGTCTTACTCTGTCGCCCAGGCTGGAGTGTAGTGGCATGATCTCGGCTCAC TGCAATCTCTGCCTCCCGGGTTCAAGCTTGTCCAGGTTGATCTTGAACTCCTGACCTCGTGATCTACCCACCTCG GCCTCCCAAAATGCTGGGATTACAGGGGTGAGCCACCGTGCCCAACCTCACTTGCTTCTTATCCTTACACTCCCC CAGCCCCAGAGAAACTGCCACATACACCACAAAAACCAAACATCCCCCAATGACCTTAGCCCCATTGCTCCATTC ACTCCCAGGTGAGAATTCAGGCAAACGTCCACAAAGGTCACAGGCAGCGTACATACGGTTCTGTTATACCCCATA TTGTGTTAACTTGCCTCCATCTTTTCTTGGGTGAGGACACCCAGGAATGACCCTTTTGTGTCTATGATGTTGCT GTTCACAGCTTTTCTTGATAGGCCTAGTACAATCTTGGGAACAGGTTACTGTATACTGAAGGTCTGACAGTAGC ATATATTTGGAGTTTTTCTGAAAAATGGAGCAGTAATGCAGCATCAACCTATTAAAATACATTTTAAGCCTTTT

MQSNKTFNLEKQNHTPRKHHQHHHQQQHQQQQQPPPPPPIPANGQQASSQNEGLTIDLKNFRKPGEKTFTQRSR LFVGNLPPDITEEEMRKLFEKYGKAGEVFIHKDKGFGFIRLETRTLAEIAKVELDNMPLRGKQLRVRFACHSASL TVRNLPQYVSNELLEEAFSVFGQVERAVVIVDDRGRPSGKGIVEFSGKPAARKALDRCSEGSFLLTTFPRPVTVE PMDQLDDEEGLPEKLVIKNQQFHKEREQPPRFAQPGSFEYEYAMRWKALIEMEKQQQDQVDRNIKEAREKLEMEM EAARHEHQVMLMRQDLMRRQEELRRMEELHNQEVQKRKQLELRQEEERRRREEEMRRQQEEMMRRQQEGFKGTFP DAVYLPCARDVPDQS

GCCAGATCTGGAAGGTGGCTGCGGAACGGTTTTAAGCGGAAGATCGAGGAGCCGGAGGAACCGGCGGACAGTGGG CAGTCGCTGGTCCCGGTTTATATCTATAGTCCCGAGTATGTCAGTATGTGTGACTCCCTGGCCAAGATCCCCAAA CGGGCCAGTATGGTGCATTCTTTGATTGAAGCATATGCACTGCATAAGCAGATGAGGATAGTTAAGCCTAAAGTG GCCTCCATGGAGGAGATGGCCACCTTCCACACTGATGCTTATCTGCAGCATCTCCAGAAGGTCAGCCAAGAGGGC GATGATCATCCGGACTCCATAGAATATGGGCTAGGTTATGACTGCCCAGCCACTGAAGGGATATTTGACTAT GCAGCAGCTATAGGAGGGGCTACGATCACAGCTGCCCAATGCCTGATTGACGGAATGTGCAAAGTAGCAATTAAC TGGTCTGGAGGGTGGCATCATGCAAAGAAAGATGAAGCATCTGGTTTTTGTTATCTCAATGATGCTGCTGGGA ATATTACGATTGCGACGGAAATTTGAGCGTATTCTCTACGTGGATTTGGATCTGCACCATGGAGATGGTGTAGAA GACGCATTCAGTTTCACCTCCAAAGTCATGACCGTGTCCCTGCACAAATTCTCCCCAGGATTTTTCCCAGGAACA GGTGACGTGTCTGATGTTGGCCTAGGGAAGGGACGGTACTACAGTGTAAATGTGCCCATTCAGGATGGCATACAA GATGAAAAATATTACCAGATCTGTGAAAGTGTACTAAAGGAAGTATACCAAGCCTTTAATCCCAAAGCAGTGGTC TTACAGCTGGGAGCTGACACAATAGCTGGGGATCCCATGTGCTCCTTTAACATGACTCCAGTGGGAATTGGCAAG TGTCTTAAGTACATCCTTCAATGGCAGTTGGCAACACTCATTTTGGGAGGAGGAGGCTATAACCTTGCCAACACG GCTCGATGCTGGACATACTTGACCGGGGTCATCCTAGGGAAAACACTATCCTCTGAGATCCCAGATCATGAGTTT TTCACAGCATATGGTCCTGATTATGTGCTGGAAATCACGCCAAGCTGCCGGCCAGACCGCAATGAGCCCCACCGA ATCCAACAATCCTCAACTACATCAAAGGGAATCTGAAGCATGTGGTCTAGTTGACAGAAAGAGATCAGGTTTCC AGAGCTGAGGAGTGGTGCCTATAATGAAGACAGCGTGTTTATGCAAGCAGTTTGTGGAATTTGTGACTGCAGGGA AAATTTGAAAGAAATTACTTCCTGAAAATTTCCAAGGGGCATCAAGTGGCAGCTGGCTTCCTGGGGTGAAGAGGC AGGCACCCCAGAGTCCTCAACTGGACCTAGGGGAAGAAGGAGATATCCCACATTTAAAGTTCTTATTTAAAAAAA CACACACACACAATGAAATTTTTAATCTTTGAAAATTATTTTTAAGCGAATTGGGGAGGGGAGTATTTTAATCA TCTTAAATGAAACAGATCAGAAGCTGGATGAGAGCAGTCACCAGTTTGTAGGGCAGGAGGCAGCTGAGAGGCAGG GTTTGGGCCTCAGGACCATCCAGGTGGAGCCCTGGGAGAGAGGGTACTGATCAGCAGACTGGGAGGTGGGGAGAA ΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑ

MEEPEEPADSGQSLVPVYIYSPEYVSMCDSLAKIPKRASMVHSLIEAYALHKQMRIVKPKVASMEEMATFHTDAY LQHLQKVSQEGDDDHPDSIEYGLGYDCPATEGIFDYAAAIGGATITAAQCLIDGMCKVAINWSGGWHHAKKDEAS GFCYLNDAVLGILRLRRKFERILYVDLDLHHGDGVEDAFSFTSKVMTVSLHKFSPGFFPGTGDVSDVGLGKGRYY SVNVPIQDGIQDEKYYQICESVLKEVYQAFNPKAVVLQLGADTIAGDPMCSFNMTPVGIGKCLKYILQWQLATLI LGGGGYNLANTARCWTYLTGVILGKTLSSEIPDHEFFTAYGPDYVLEITPSCRPDRNEPHRIQQILNYIKGNLKH VV

MARGPKKHLKRVAAPKHWMLDKLTGVFAPRPSTGPHKLRECLPLIIFLRNRLKYALTGDEVKKICMQRFIKIDGK VRTDITYPAGFMDVISIDKTGENFRLIYDTKGRFAVHRITPEEAKYKLCKVRKIFVGTKGIPHLVTHDARTIRYP DPLIKVNDTIQIDLETGKITDFIKFDTGNLCMVTGGANLGRIGVITNRERHPGSFDVVHVKDANGNSFATRLSNI FVIGKGNKPWISLPRGKGIRLTIAEERDKRLAAKQSSG

ATGGGTCCACGTCTTGCAGCTACAGCTGCTGCAGCTACTCCTGCTGTCCGCACCGTTCCACAGTATAAATATGCT
GCGGGAGTTTGCAATCCTCAGCAACATCTTAATGCACAGCCACAAGTTACAGTGCAACAGCCTGCTATTCATGTA
CAAGGTCAGGAACCTTTGACTGTTTCCATGTTGGCATCTTGCCCCTCAAGAGCAAAAGCAAATGTTGGGTGAATGG
CTGTTTCCTCTTATTCAAGCCATGCACCCTACTCTTGCCGGTAAAATCACTGGCGTGTTGTTGGAGATTGATAAT
TCAGAACTTCTTCATATGCTCAAGTCTCCAGAGTCACCTCCATTCTAAGGTTGATGAAGCTGTAGCTGTACTACAA
GCCCACCAAGCTAAAGAGACTGCCCAGAAAGCAGTTAACAGTGCCACCGGTGTTCCAACTGTTTAA

ACTTATAGAAGGGAGAGGAGCGAACATGGCAGCGCGTTGGCGGTTTTGGTGTCTCTGTGACCATGGTGGTGGC CCCACCGAGAAATTACTCCGTTATCGTCATGTTCACTGCTCTCCAACTGCATAGACAGTGTGTCGTTTTGCAAGCA **AGCTGATGAAGAATTCCAGATCCTGGCAAACTCCTGGCGATACTCCAGTGCATTCACCAACAGGATATTTTTTTGC** CATGGTGGATTTTGATGAAGGCTCTGATGTATTTCAGATGCTAAACATGAATTCAGCTCCAACTTTCATCAACTT TCCTGCAAAAGGGAAACCCAAACGGGGTGATACATATGAGTTACAGGTGCGGGGTTTTTCAGCTGAGCAGATTGC CCGGTGGATCGCCGACAGAACTGATGTCAATATTAGAGTGATTAGACCCCCAAATTATGCTGGTCCCCTTATGTT GGGATTGCTTTTGGCTGTTATTGGTGGACTTGTGTATCTTCGAAGAAGTAATATGGAATTTCTCTTTAATAAAAC TGGATGGCTTTTGCAGCTTTGTGTTTTTGTGCTTGCTATGACATCTGGTCAAATGTGGAACCATATAAGAGGACC ACCATATGCCCATAAGAATCCCCACACGGGACATGTGAATTATATCCATGGAAGCAGTCAAGCCCAGTTTGTAGC TGAAACACACTTGTTCTTCTGTTTAATGGTGGAGTTACCTTAGGAATGGTGCTTTTATGTGAAGCTGCTACCTC TGAÇATGGATATTGGAAAGCGAAAGATAATGTGTGTGGGCTGGTATTGGACTTGTTATTATTCTTCAGTTGGAT GCTCTCTATTTTTAGATCTAAATATCATGGCTACCCATACAGCTTTCTGATGAGTTAAAAAGGTCCCAGAGATAT TGTATTACCTCTTTTTTCAAGTGATTTAAATAGTTAATCATTTAACCAAAGAAGATGTGTAGTGCCTTAACAAG CAATCCTCTGTCAAAATCTGAGGTATTTGAAAATAATTATCCTCTTAACCTTCTCTCCCAGTGAACTTTATGGA TGTATACTTTACGCATCTTTCCTTTTGAGTAGAGAAATTATGTGTGTCATGTGGTCTTCTGAAAATGGAACACCA TTCTTCAGAGCACACGTCTAGCCCTCAGCAAGACAGTTGTTTCTCCTCCTCCTTGCATATTTCCTACTGCGCTCC AGCCTGAGTGATAGAGTGAGACTCTGTCTCAAAAAAAAGTATCTCTAAATACAGGATTATAATTTCTGCTTGAGT TCTGTGATAAAAATATAGCTTAGTGCTAAAATCAGTGTAACTTATACATGGCCTAAAATGTTTCTACAAATTAGA GTTTGTCACTTATTCCATTTGTACCTAAGAGAAAAATAGGCTCAGTTAGAAAAGGACTCCCTGGCCAGGCGCAGT TGGCCAACATGGTGAAACCCCGTCTCTACTAAAAATATAAAAATTAGCTGGGTGTGGCAGGAGCCTGTAATC CCAGCTACACAGGAGGCTGAGGCACGAGAATCACTTGAACTCAGGAGATGGAGGTTTCAGTGAGCCAAGATCACA

AAGCCTCCGGAGCGCACGTCGGCAGTCGGCTCCCTCGTTGACCGAATCACCGACCTCTCTCCCCAGCTGTATTTC CAAAATGTCGCTTTCTAACAAGCTGACGCTGGACAAGCTGGACGTTAAAGGGAAGCGGGTCGTTATGAGAGTCGA CTTCAATGTTCCTATGAAGAACAACCAGATAACAACCAGAGGATTAAGGCTGCTGTCCCAAGCATCAAATT CAAGTACTCCTTAGAGCCAGTTGCTGTAGAACTCAAATCTCTGCTGGGCAAGGATGTTCTGTTCTTGAAGGACTG TGTAGGCCCAGAAGTGGAGAAAGCCTGTGCCAACCCAGCTGCTGGGTCTGTCATCCTGCTGGAGAACCTCCGCTT TCATGTGGAGGAAGAAGGGAAAGATGCTTCTGGGAACAAGGTTAAAGCCGAGCCAAAAATAGAAGC TTTCCGAGCTTCACTTTCCAAGCTAGGGGATGTCTATGTCAATGATGCTTTTGGCACTGCTCACAGAGCCCACAG $\tt CTCCATGGTAGGAGTCAATCTGCCACAGAAGGCTGGTGGGTTTTTGATGAAGAAGGAGCTGAACTACTTTGCAAA$ GGCCTTGGAGAGCCCAGAGCGACCCTTCCTGGCCATCCTGGGCGGAGCTAAAGTTGCAGACAAGATCCAGCTCAT CAACATGGAGATTGGCACTTCTCTGTTTGATGAAGAGGGAGCCAAGATTGTCAAAGACCTAATGTCCAAAGCTGA GAAGAATGGTGTGAAGATTACCTTGCCTGTTGACTTTGTCACTGCTGACAAGTTTGATGAGAATGCCAAGACTGG ${\tt CCAAGCCACTGTGGCTTCTGGCATACCTGCTGGCTGGATGGGCTTGGACTGTGGTCCTGAAAGCAGCAAGAAGTA}$ TGCTGAGGCTGTCACTCGGGCTAAGCAGATTGTGTGGAATGGTCCTGTGGGGGTATTTGAATGGGAAGCTTTTGC ${\tt CCGGGGAACCAAAGCTCTCATGGATGAGGTGGTGAAAGCCACTTCTAGGGGCTGCATCACCATCATAGGTGGTGG}$ AGACACTGCCACTTGCTGTGCCAAATGGAACACGGAGGATAAAGTCAGCCATGTGAGCACTGGGGGTGGTGCCAG TTTGGAGCTCCTGGAAGGTAAAGTCCTTCCTGGGGTGGATGCTCTCAGCAATATTTAGTACTTTCCTGCCTTTTA GTTCCTGTGCACAGCCCCTAAGTCAACTTAGCATTTTCTGCATCTCCACTTGGCATTAGCTAAAACCTTCCATGT CAAGATTCAGCTAGTGGCCAAGAGTGCCAGGAACCCTTAAACAGTTGCACAGCATCTCAGCTCATCTTC ACTGCACCCTGGATTTGCATACATTCTTCAAGATCCCATTTGAATTTTTTAGTGACTAAACCATTGTGCATTCTA GAGTGCATATATTTATATTTTGCCTGTTAAAAAGAAAGTGAGCAGTGTTAGCTTAGTTCTCTTTTGATGTAGGTT AAAATTGATGATCCATTAAGTAAACAATAAAAGTGTCCATTG

MSLSNKLTLDKLDVKGKRVVMRVDFNVPMKNNQITNNQRIKAAVPSIKFCLDNGAKSVVLMSHLGRPDGVPMPDK YSLEPVAVELKSLLGKDVLFLKDCVGPEVEKACANPAAGSVILLENLRFHVEEEGKGKDASGNKVKAEPAKIEAF RASLSKLGDVYVNDAFGTAHRAHSSMVGVNLPQKAGGFLMKKELNYFAKALESPERPFLAILGGAKVADKIQLIN NMLDKVNEMIIGGGMAFTFLKVLNNMEIGTSLFDEEGAKIVKDLMSKAEKNGVKITLPVDFVTADKFDENAKTGQ ATVASGIPAGWMGLDCGPESSKKYAEAVTRAKQIVWNGPVGVFEWEAFARGTKALMDEVVKATSRGCITIIGGGD TATCCAKWNTEDKVSHVSTGGGASLELLEGKVLPGVDALSNI

CTCCCTGCCTCCGCGCTGCAGCCCCTGAGCCCCCTGAGCCCGCCACCACCGCCTCTGAGCAGAAGATGG $\tt CTGTGCCACCTACGTATGCTGATCTTGGCAAATCTGCCAGGGATGTCTTCACTGAGGGCTATGGATTTGGCTTAA$ TAAAGCTTGATTTGAAAACAAAATATGAGAATGGATTGGAATTTACAAGCTCAAGCTCAGCCAACACAGACCACC AAAGTGACGGGCAGTCTGGAAACCAAGTACAGATGGACTGAGTACGGCCTCACGTTTACAGAGAAATGGAACACC GACAATACACTAGGCACCAAGATTACTGTGGAAGATCAGCTTGCACGTGGACTGAAGCTGACCTTCGATTCATCC TTTTCACCTAACACTGGGAAAAAAATGCTAAAATCAAGACAGGGTACAAGCGGGAGCACATTAACCTGGGCTGC TATCAGATGAATTTTGAGACTACAAAATCCCGAGTGACCCAGAGCAACTTTGCAATTGGCTACAAGACTGATGAA TTCCAGCTTCACACAAATGTGAATGACGGGACAGAGTTTGGCGGCTCCATTTACCAGAAAGTGAACAAGAAGTTG GAGACCACCGTCAATCTTGCCTGGACAGCAGGAAACAGTAACACGCGCTTCGGAATAGCAGCCAAGTATCAGATT GACCCTGACGCCTGCTTCTCGGCTAAAGTGAACAACTCCAGCCTGATAGGTTTAGGATACACTCAGACTCTAAAG ${\tt CCAGGTATCAAACTGACACTGTCAGCTCTTCTGGATGGCAAGAACGTCAATGCTGGTGGCCACAAGCTTGGTCTA}$ GGACTGGAATTTCAAGCATAAATGAATACTGTACAATTGTTTAATTTTAAACTATTTTGCAGCATAGCTACCTTC AGAATTTAGTGTTATCTTTTAATGTTGTATGTCTGGGATGCAAGTATTGCTAAATATGTTACCCCTCCAGGTTAA AGATGATTCAGCTTTAAGATGTTACCCTTCCAGAGGTACAGAAGAAACGCATTTCCAAAAAAGGTTCTTTCAGTG GTAGACTCGGGGAGAACTTGGTGGCCCCTTTGAGGTGCCAGGTTTCTTTTCATCTAGAGATGGCTGCGAGTGGA ${\tt CATGGTTTCCTAACCCTAATTGATGAGAGGCTCGCTGCTTGATGGTGTGTACAAGCTCACCTGAATGGGACTTTT}$ TTAGACAGATCTTCATGACCTGTTCCCACCCCAGTTCATCATCATCTCTTTTACACCAAAAGGTCTGCAGGGTGT GGTCACTCTTTCTTTGTGCCATTTTGGGGTGGAGAAGGTAGATGTGATGAAACCAATAATTCAGGACTTATTCC TTCTTGTGTTGTGTTTTTTTTGCCCTTGCACCAGAGTATGAAATAGCTTCCAGGAGCTCCAGCTATAAGCTTGG GAGTGTCTGTGTGATTGTAATCACATGGTGACAGCACTCAGAATCTAAATTGGACTTCTGCTGTATTCTCACCAC TCAATTTGTTTTTTAGCAATTTAATGGCTÁCATTTTAGAGTCTTCCATTTTTTGTGGAATTAGATCCTCCCCTTC AAATGCTGTAATTAACATCACTTAAGAAAACTTGAATAAAATGTTGAAACCTC

TAGCTGGATTCCAGCCATTGCTGCAGCTGCTCCACAGCCCTTTTCAGGACCCAAACAACCAGCCGCTGTTCCC $\texttt{AGG} \underline{\textbf{ATG}} \texttt{GTGATCCGTGTATATATTGCATCTTCCTCTGGCTCTACAGCGATTAAGAAGAACAACAAGATGTGCTT}$ GGTTTCCTAGAAGCCAACAAAATAGGATTTGAAGAAAAAGATATTGCAGCCAATGAAGAGAATCGGAAGTGGATG AGAGAAAATGTACCTGAAAATAGTCGACCAGCCACAGGTTACCCCCTGCCACCTCAGATTTTCAATGAAAGCCAG TATCGCGGGGACTATGATGCCTTCTTTGAAGCCAGAGAAAATAATGCAGTGTATGCCTTCTTAGGCTTGACAGCC $\tt CCACCTGGTTCAAAGGAAGCAGGAAGTGCAAGCAAGCAGCATGAAGCACTGTGCTTTAAGCATCC$ TGAAAAATGAGTCTCCATTGCTTTATAAAATAGCAGAATTAGCTTTGCTTCAAAAGAAATAGGCTTAATGTTGA AATAATAGATTAGTTGGGTTTTCACATGCAAACATTCAAAATGAATACAAAATTAAAATTTGAACATTATGGTGA TTATGGTGAGGAGAATGGGATATTAACATAAAATTATATTAATAAGTAGATATCGTAGAAATAGTGTTGTTACCT GCCAAGCCATCCTGTATACACCAATGATTTTACAAAGAAAACACCCTTCCCTCCTTCTGCCATTACTATGGCAAC TTAAGTGTATCTGCAGCTCTACATTAAAAAGGAGAAAGAGAAATAACCTGTCTCTCATTCCTAAGTTGCCTCATT AATTTTCATGAACAAGAATATGTACCTTTTTGATGCTATATTACTGCGATTAAAAAGTTCTTGCAGGTAATGTTT ATGATATGTTAAACGTTGTAATTTCCTATCGTAATTATAACATTCCCATTCTTTTGTAGATGAAACTTCTACATA TTGAACCACAGATTTTCTGAGCTTCTAAATGTAGCCTTTCATTGCACATTTCAGTGATCAGAATAGATATCCTTT TACACGCACAAAAGCAATAGATTCATTCAGTGGACAAGTTCCTTGTTTAACTACACAGCTATGATGGAATGATAT ATCCAAGTTCCTTGCCTCAGTGAAATATGCATATGTATATCATGAAAGTGGGATGCCAAGTAAGCTTAAAATGGC ATTCTCTAGCAAAGAGATTAGACTTTTAAATAACTCTTATAAAACAGGTTGGCGATCATTTCCCAAGATTGGTTT CCCTTGAGTTTTTGCTAAAACAAATCTTAGTAGTTTTGCCCGTTTAAAACAACTCACAATCGTAAATGCTACTAT TCCTAAGATATCTTACCTTTTTATTTCAGTTTAGCCATGTATTGTATGAGTGTATTAGTCTAAGCAGTGAGAATC TTTTCTATGCCTCTATTCCAGCAAAAGTAGAAGTATCAAATAAAAAGGGCAACTTTTAAAATATTAAGCCTGAA GACTTCTAAAAAGACAAGAAACATGGCCTAAATAACCAACATAGATTTACATAGTTAAGTTTCACACTACCTTATT ACCAAAAGCAAACACCTCTTACTTTAAACTACATTATCATGTATATCTATTGTATGCTGGTCTTTACTTTTTGCC AAAATCAACATATAATGAAGAGATGCCTTTGTTTCATGAGATTCAAACTTGATGCTATGCTTTAAAATAAACTCA GTACTTTTAGAAACAT

 ${\tt MVIRVYIASSSGSTAIKKKQQDVLGFLEANKIGFEEKDIAANEENRKWMRENVPENSRPATGYPLPPQIFNESQYRRGDYDAFFEARENNAVYAFLGLTAPPGSKEAEVQAKQQA}$

MSGALDVLQMKEEDVLKFLAAGTHLGGTNLDFQMEQYIYKRKSDGIYIINLKRTWEKLLLTARAIVAIENPADVS VISSRNTGQRAVLKFAAATGATPIAGRFTPGTFTNQIQAAFREPRLLVVSDPRADHQPLTEASYVNLPTIALCNT DSPLHYVDIAIPCNNKGTHSVGLMWWMLAREVLRMRGTISREHPWEVMPDLYFYRDPEEIEKEEQAAAEKAMTRE ELQGEWTAPAPEFTATQPEVADWSEGVQVPSVPIQQFPTEDWSTQRATEDWSAAPTAQATEWVGATTDWS

GATCATGTCTGTAAGCCAGGATTCCTGATCCAGAGACAATGGCCCCGATGGGATGGAGCCCGAAGGCGTCATCGA GAGTAACTGGAATGAGATTGTTGACAGCTTTGATGACATGAACCTCTCGGAGTCCCTTCTCCGTGACATCTATGC CTATGGTTTTGAGAAGCCCTCTGCCATCCAGCAGCAAGCCATTCTACCTTGTATCAGGGGTTATAATGTAATCGC TCAAGCCTGATCTGGGACTGGGAAAATGGCCACATTTGCCATATCGATTCTGCAGCAGATTGCATTAGATCTAAA AGCCACCCAGGCCTTGGTCCTAGCACCCACTCGAGAATTGGCTCAGCAGATACAGAAGGTGGTCATGGCACTAGT GGAAGCTCCCCACATCATCGTGGGTACCCCTAGCTGTGTTTTGATATGCTTAACCGGAGATACCTATCTCCCAA ATACATCAAGATGTTTGTACTGGATGAAGCTGACGAAATGTTAAGCCGTGGATTCAAGGACCAGATCTATGACAT ATTCCAAAAGCTCAACACCCAGGTAGTTTTGCTGTCAGCTACAATGCCTTCTGATGTGCTTGAGGTGAT $\tt CTACATCAACGTGGAACGAGGAGGTGGAAGCTGGACACCACTATGTGACTTGTATGAAACCCTGACCATCACCCA$ CTCCGCCATGCATGGAGATATGGACCAAAAGGAGCGAGACGTGATCACGAGGGAGTTTCGTTCTGGCTCTAGCAG AGTTTTGATTACCACTGACCTGCTGGGAAAACTATATCCACAGAATCAGTCGAGGTGGACAGTTTGGCCGTAAAG ATGTGGCTATTAACATGGTGACAGAAGAAGAAGACATCTTCGAGACATTGAGACCTTCTACAACACCTCCA CTCGGGGGGCTGAGGAGCAGCAGGAGAGGGAAGGAAGGAGCCAAGGGATAGACATCTTGTCATTTTTTTCTT TGAATAAATGTCACTTTTTGAGGCAAAA

TCGTCGGCAAAGCCTGAGTCCTGTCCTATCTCTCCCCCGGACAGCATGAGCTTCACCACTCGGTCCACCTT CGTCTATGCAGGCGCCGGGGGCTCTGGTTCCCGGATCTCCGTGTCCCGCTCCACCAGCTTCCGGGGTGGCATGGG GCCTGGGGGCCTGGCCGGGGATGGCTGGGGGGTCTGGCAGGAATGGGAGGCATCCAGAACAAGAAGACCATGCA AAGCCTGAACGACCGCCTGGCCTCTTACCTGGACAGAGTGAGGAGCCTGGAGACTGAGAACCGTAGGCTGGAGAG CAAAATCCGGGAGCACTTGGAGAATAAGGGACCCCAGGTCAAAGACTGGAGCCATTACTGCAAGACCATCGAGGA CCTGAGGGCTCAGATCTTCGCAAATACTGTGGACAATGCCTGCATCGTTCTGCATATTGACAATGCCCGTCTTGC TGCTGATGACTTTAGAGTCAAGTATGAGACACAGCTGGCGATGCGCCAGTCTGTGGAGAACGACATCCATGGGCT CCGCAAGGTCATTGATGACACCAATGTCACTTGACTGCAGCTGGAGACAGAGATTGAGGCTCTCAGGGAGGAGCT GCTCTTCATGAAGAACCACGAAGAGGAAGTAAAAGGCCTACAAGCCCAGATTGCCAGCTTTAGGTTGACCGTGGA GAAGAACCGAGAGGAGCTAGACAAATACTGGCCTCAGCAGTTTGAGGAGAACACCACAGTGGTCACCACAGTCCG CCGAGGTTGGAGCTGCTGAGATGACGCTCACAGAGCTGAGACGTACAGTCCAGTCCTTGGAGATCGACCTGGACT AGCTCATCGGGATCCTGCTGCACCTGGAGTCAGAGCTGGCACAGACCCGGGCAGAGAGACAGTGCCAGGCCCAGG AGTAATGAGGCCCTGCTGAACATCAAGGTCAAGCTGGAGGCTGAGATCGCCACCTACCGCCGCCTGCTGGAAGAT GGCGAGGACTTCACTCTTGGTGATGCCTTGGACAGCAGGAACTCCATGCAAAACCATCCAAAAGACCACCACCCGC GTACCCTTTGGGGAGCAGGAGGCCAATAAAAAGTACAGAGTT

 $\tt CGGAAGCCGACTCAACAGAGCT{\color{red} \underline{\textbf{ATG}}} GCGGGTTTGACTGTGAGAGACCCAGCGGTGGATCGTTCTCTACGTTCTGT$ GTTCGTGGGGAACATTCCTTATGAAGCTACTGAAGAGCAGTTGAAGGACATCTTTTCTGAGGTTGGACCTGTTGT TAGTTTCAGATTGGTATACGATAGAGAGACAGGAAAGCCAAAGGGTTATGGCTTCTGTGAATACCAAGACCAAGA GACAGCACTTAGTGCCATGCGGAACCTGAATGGGCGCGAATTCAGTGGGAGAGCACTTCGAGTGGACAATGCTGC CAGTGAAAAGAACAAAGAAGAGCTGAAGAGCCTTGGCACTGGTGCCCCTGTCATTGAGTCACCTTATGGAGAGAC ${\tt CATCAGTCCTGAGGATGCCCCTGAGTCCATTAGCAAAGCAGTTGCCAGCCTTCCACCAGAGCAGATGTTTGAGCT}$ GATGAAACAAATGAAGCTCTGTGTCCAGAATAGTCCCCAGGAGGCACGGAACATGTTACTTCAGAACCCTCAACT GGCTTATGCTTTGCTGCAAGCACAGGTAGTGATGAGAATTGTGGATCCGGAAATTGCCCTGAAAATTCTGCATCG ${\tt CCAGACAAATATCCCAACGCTGATTGCAGGCAACCCTCAGCCAGTCCATGGTGCTGGGCCTGGCTCAGGATCCAA}$ TGTGTCAATGAACCAGCAGAATCCTCAGGCCCCTCAGGCCCAGTCTTTGGGTGGAATGCATGTCAATGGCGCACC TCCTCTGATGCAAGCTTCTATGCAGGGTGGAGTTCCAGCACCAGGGCAAATGCCAGCTGCTGTCACAGGACCTGG ${\tt CCCTGGTTCCTTAGCTCCTGGAGGAGGAATGCAGGCTCAGGTTGGAATGCCAGGAAGTGGACCAGTGTCCATGGA}$ ${\tt ACGGGGGCAAGTGCCGATGCAAGACCCCAGAGCAGCTATGCAGCGGGGATCCTTGCCTGCGAATGTCCCAACCCC}$ TCGAGGCTTGTTAGGAGATGCTCCGAATGATCCACGGGGAGGCACTTTACTTTCTGTAACTGGAGAGGTAGAGCC TAGAGGTTACTTGGGACCACCTCATCAGGGTCCACCCATGCACCATGTCCCTGGCCATGAGAGCCGAGGACCACC CCCACATGAACTGAGGGGAGGGCCATTACCCGAGCCCAGACCTCTAATGGCAGAACCAAGAGGACCCATGCTAGA TCAGAGGGGTCCACCCTTGGATGGCAGAGGTGGAAGGGATCCCCGAGGAATAGATGCACGAGGGATGGAGGCCCG TGCAATGGAGGCCCGAGCGATGGAGGCCCGTGCAATGGAAGTCCGAGGGATGGAGGCCAGAGGCATGGATACCAG AGGCCCAGTGCCTGGCCCCAGAGGACCTATACCTAGTGGAATGCAGGGTCCCAGTCCAATTAACATGGGGGCGGT TGTCCCCCAGGGATCCAGACAGGTCCCAGTCATGCAGGGAACAGGAATGCAAGGAGCAAGTATACAGGGTGGAAG ${\tt CCAGCCTGGCGGCTTTAGTCCCGGGCAGAACCAAGTCACTCCACAGGATCATGAGAAGGCTGCTTTGATTATGCA}$ GGTTCTACAACTGACTGCAGACCAGATTGCCATGTTGCCTCCTGAGCAAAGGCAGAGTATCCTGATTTTAAAGGA ${\tt ACAAATACAGAAATCCACTGGAGCACCT}{{\tt TGA}}{\tt TAGGTTTTCAAAAATACCTGGCAAGAAATCTGGAAATTCTATAA$ TTTTGTTGAAATATTGAAAAAAGATGACCTGCATCCTAACCCTTGAATGACTCAAATCAGTGCCAGGTGGAGGAC TCCCATCACCTTCTCTCAGAACAAAATCACTTCATTTTATTGTCTTAGTTTGTATATTTTCTGTGACTTGAAATA AACTTTGAACACAATTTTAGTACACTGC

MAGLTVRDPAVDRSLRSVFVGNIPYEATEEQLKDIFSEVGPVVSFRLVYDRETGKPKGYGFCEYQDQETALSAMR NLNGREFSGRALRVDNAASEKNKEELKSLGTGAPVIESPYGETISPEDAPESISKAVASLPPEQMFELMKQMKLC VQNSPQEARNMLLQNPQLAYALLQAQVVMRIVDPEIALKILHRQTNIPTLIAGNPQPVHGAGPGSGSNVSMNQQN PQAPQAQSLGGMHVNGAPPLMQASMQGGVPAPGQMPAAVTGPGPGSLAPGGGMQAQVGMPGSGPVSMERGQVPMQ DPRAAMQRGSLPANVPTPRGLLGDAPNDPRGGTLLSVTGEVEPRGYLGPPHQGPPMHHVPGHESRGPPPHELRGG PLPEPRPLMAEPRGPMLDQRGPPLDGRGGRDPRGIDARGMEARAMEARGLDARGLEARAMEARAMEARAM EARAMEVRGMEARGMDTRGPVPGPRGPIPSGMQGPSPINMGAVVPQGSRQVPVMQGTGMQGASIQGGSQPGGFSPGQNQVTPQDHEKAALIMQVLQLTADQIAMLPPEQRQSILILKEQIQKSTGAP

AAGGGTTGGCTGCGCGGGGGGGGGGGGGGGGGCGCCTTGCGCACCAGGAAGTGACTGTTTCCCCGCCGCAGCAA ATTTCAGTGTGTTCTTTGGATGGCAGGCCTTAAGAGAAGAGTCCCACTGCACAGCCTCAGATACTTCATCTCCAT GGTGGGTCTCTTCTCCAAACCAGGACTGCTTCCCTGGTATGCCAGAAATCCACCAGGATGGTCACAGCTCTTTCT GGGCACAGTATGTAAGGGAGATTTCACCCGTGTGATAGCCACGAAATGTCAGAAAGGACAAAAAAGTCAGAAGAA GAGCTATGAAGAACAGCTCAAGGTGAAATTTGCAGCTCAGAAGAAAATTTTACAAAGACTAGAGTCTTACATCCA AATGCTCAATGGAGTCAGTGTGACAACGGCTGTACCCAAATCTGAGAGGCTCTCTTGTCTTCTCCATCCTATTAT ACCCTCTCCTGTCATCAATGGTTACCGAAATAAGTCCACCTTCTCTGTGAACCGAGGTCCAGATGGCAATCCAAA GACTGTGGGGTTCTACCTGGGAACTTGGAGAGATGGGAACGTTGTCTGTGTGCAGTCTAATCATCTGAAAAACAT CCCTGAGAAACACAGTCAAGTGGCGCAGTACTATGAAGTATTCCTTCGACAGTCTCCATTGGAGCCCTGCCTTGT ATTTCATGAAGGTGGATACTGGCGTGAGCTCACAGTCCGCACCAATAGCCAAGGGCACACAATGGCTATCATCAC TTTCCATCCCCAGAAATTAAGTCAGGAGGAGCTCCATGTTCAGAAGGAGATTGTAAAGGAATTTTTCATCAGAGG TCCTGGAGCAGCCTGTGGCTTGACCTCACTTTACTTCCAGGAAAGTACCATGACCCGTTGCAGCCATCAGCAGTC TCCCTATCAGCTTCTGTTTGGGGAACCCTACATCTTTGAAGAACTTCTGAGCTTGAAGATCCGCATCTCTCCAGA CCTTGGGATTGAATTGTTGGAGCAGGCAGTGGAGGATGCAAGATGGACTGCAGCCTTCAATGGCATCACCAACTC TGAATTTCATACTGGTCAAGCAGAGAAGATTTTGCCAGGGCTGCTAAAGTCAAAGGAAGATGGACAGTCAATTGT TGCTGTGGTGAACCCAGCCCGTGCCGGACTGCATTACAAGGTGATTCAAGCCATTCGAAACTTCAGGGCCATCCA CACGCTAGTTTTTGTTTCCTGCAAGCTCCATGGTGAATCCACTAGGAATGTCATTGAGCTGTGCTGCTCCAGA CCCTGCTAAGAAGCTCTTAGGCGAGCCCTTTGTCCTGCAGCAAGCTGTACCTGTGGATTTGTTCCCTCACACCCC ACATTGTGAGCTGGTGCTCCTCTTTACTCGATAAGCAGCCTCCTAGAAGACAGCAGGCTATTTGTTAAGGCTGAA GTTTCAGAAACTTTCAGGTTTGGCATATTGCTACATTGCAGACCCTGGGAGCATTACAGTGGAAACCAATCTTTG $\tt CCCAGGCTGGAGTGTCGTGGCTCACTCCACTCCACCTCCGCGTTCAAGTGATTCTCGTGCC$ TCAGCTTCCCCAGTAGCTAGGATTAAAGGTGCGTGCCACCATGCCCGGCTAATTTTTGTATTTTTGGTAGAGACA GGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGATCCACCCGCCTCGGCCTCTCAAAGT GCTGGGATTATAGGCGTGAGCCACCACACCCCGCCGCGGCTGACTTAACCTTAGATTTCAGATTCCCTTTCAATC ATGCCCGTTTGCTTGGGTTTGACCACTCCCCACTCCTGGATCTGGACTGTTTCTTCCTGTTGCTGTCAGCCTTGG TTCTAGTTTATAGTCTTGTCTCCTCCGTTTCTGCTTATGGTGTGGACAAATGACCTTTTTTAAGCAGCTGGTAAT AATTTTACATTGACTGGAGCCTGTGCATTTGCTCAGAGATGCTACAATTTTTAGATATTTCTAAGACTTCTGGAT TCTTGAGGTAGTTAAGGATTAAAACCAGAAACAGTCGAGGTTTTTTAAAAGCAGGGTAAGCCATGAAGTGAATAC AGGGTGACTGAGTGATCATCAGATGAGATTAATTCTTTTGGGTTTTCTTGGTTTTTAAGGCATCTCGAATGCCCCT TGAAAATGTAGTTTTCCCTGGTGGTGGGCACCTGTAATCCCAGCTACTCGGGAGGCTGAGGCAGGATAATTGCTT GAACCTGGGAGGTGGAGGTTGCAGTGAGCTGAAATTGTGCCACTGCACTCCAGCCTGGGTGACAGAGTGAGACAC CATCTC

 ${\tt GCGGAGTTCGTCTCTGCAAGCTTGGTCGCCCTGGG} \underline{{\tt ATC}}{\tt GATTCCTCCTCTTCTCCTCCGCGGGGGGTTTGGGTG}$ CAGTGGACCCACAGTTGCAGCATTTCATCGAGGTAGAGACTCAAAAGCAGCGCTTCCAGCAGCTGGTGCACCAGA TGACTGAACTTTGTTGGGAGAAGTGCATGGACAAGCCTGGGCCAAAGTTGGACAGTCGGGCTGAGGCCTGTTTTG TGAACTGCGTTGAGCGCTTCATTGATACAAGCCAGTTCATCTTGAATCGACTGGAACAGACCCAGAAATCCAAGC $\texttt{CAGTTTTCTCAGAAAGCCTTTCTGAC} \underline{\texttt{TGA}} \texttt{TCTCAGCATTACCTCTTTGGAAAAGGAAGGTAGTTCAAGAAATGAA}$ GAGCTGTTGATGGGATGATTGAAGAAACAGCTATGAGAGGATTGGCTCCCATCTTTTGTTACTCTTGGGACATCC ATGCTAATCTTGTGAAAATAATTGACAGGCGAAAGAAAACTCTATTTAGATGCATATTACTGTACATGGGACTAT GCTTTTCTCAAAGCCCCATTAACTGCTTCCTATAATTTTGATAGTGGGACCACATACGTAAAAATCTCTCATTTG TGTGGAGTCATTTCTGATTTCAGGGGAGATCCTTGTGTTTATCAGAAAGGGCAGAAGTAGGGGAAGAATAATTTG GTATCCTTATCTAGTGTTTGATTGTCAATGCTGGAGAAAAATATCTGTAAGAGTGTTTATACAGTACACTTCAGT GCCTGAGAGTCTAGAGGCCTTTAGTTATAAAGGAATCTAGCCAGTGAACATAATTCTTATTACTAGACTGCCACA AGGAAGAATTAACTTACCCTGTATATCAGGGTACAAAAAATTCAGTGATGTGCCTAAATAAGTTATAAAGATTT GCATTCTTCTGATCACTGAAATAAAAGCTATATAAGATTCATA

 ${\tt MDSSSSSAAGLGAVDPQLQHFIEVETQKQRFQQLVHQMTELCWEKCMDKPGPKLDSRAEACFVNCVERFIDTSQFILNRLEQTQKSKPVFSESLSD}$

 ${\tt MVNVPKTRTFCKKCGKHQPHKVTQYKKGKDSLYAQGKRRYDRKQSGYGGQTKPIFRKKAKTTKKIVLRLECVEP} \\ {\tt NCRSKRMLAIKRCKHFELGGDKKRKGQVIQF}$

CACGTCGGCTGCTGGGAAGATCTGGATTCTCGTTTCAGGTCACCATCAGAAAAGCTAAGTTTGCTGTATAGTGAG GATCAGGAGATCTGATCCTGATTGCAGAACCTTCCCTGATTACAGAATCTTGGATGATTTCACAAAAGTTCATCT TCATTGCAGATACCTGCCTTTCTTTCTAGGTTGTATCTCCCACTTCACCCTTCTAGACCATCCCAGAAGATCTAT GTTGA<u>ATG</u>AGTTCCAGAAAGCAGGGTTCTCAACCTCGTGGACAGCAATCTGCAGAAGAAGAAGAACTTCAAAAAAC CAACTAGAAGCAACATGCAGAAGTAAAATGAGAGGGGCCTCCTCAGGAAAGAAGACAGCTGGTCCACAGCAGA AAAATCTTGAACCAGCTCTCCCAGGAAGATGGGGTGGTCGCTCTGCAGAGAACCCCCCTTCAGGATCCGTGAGGA AGACCAGAAGAACAAGCAGAAGACTCCTGGAAACGGAGATGGTGGCAGTACCAGCGAAGCACCTCAGCCCCCTC GGAAGAAAAGGGCCCGGGCAGACCCCACTGTTGAAAGTGAGGAGGCGTTTAAGAATAGAATGGAGGTTAAAGTGA AGATTCCTGAAGAATTAAAACCATGGCTTGTTGAGGACTGGGACTTAGTTACCAGGCAGAAGCAGCTGTTTCAAC TCCCTGCCAAGAAAATGTAGATGCAATTCTGGAGGAGTATGCAAATTGCAAGAAATCGCAGGGAAATGTTGATA ATAAGGAATATGCGGTTAATGAAGTTGTGGCAGGAATAAAAGAATATTTCAATGTGATGTTGGGCACTCAGCTGC TCTACAAATTTGAGAGGCCCCAGTATGCTGAAATCCTCTTGGCTCACCCTGATGCTCCAATGTCCCAGGTTTATG GAGCACCACCCTACTGAGATTATTTGTAAGAATTGGAGCAATGTTGGCCTATACGCCCCTTGATGAGAAAAGCC TTGCATTATTGTTGGGCTATTTGCATGATTTCCTAAAATATCTGGCAAAGAATTCTGCATCTCTTTACTGCCA GTGATTACAAAGTGGCTTCTGCTGAGTACCACCGCAAAGCCCTG<u>TGA</u>GCGTCTACAGACAGCTCACCATTTTTGT CCTGTATCTGTAAACACTTTTTGTTCTTAGTCTTTTTCTTGTAAAATTGATGTTCTTTAAAATCGTTAATGTATA ACAGGGCTTATGTTTCAGTTTGTTTTCCGTTCTGTTTTAAACAGAAAATAAAAGGAGTGTAAGCTCCTTTTCTCA TTTCAAAGTTGCTACCAGTGTATGCAGTAATTAGAACAAAGAAGAAACATTCAGTAGAACATTTTATTGCCTAGT TGACAACATTGCTTGAATGCTGGTGGTTCCTATCCCTTTGACACTACACAATTTTCTAATATGTGTTAATGCTAT GTGACAAAACGCCCTGATTCCTAGTGCCAAAGGTTCAACTTAATGTATATACCTGAAAACCCATGCATTTGTGCT ATCTTTGCTCAAATTGTTGAAGGATGGTGATTTGTTTCATGGTTTTTGTATTTGAGTCTAATGCACGTTCTAACA TGATAGAGGCAATGCATTATTGTGTAGCCACGGTTTTCTGGAAAAGTTGATATTTTAGGAATTGTATTTCAGATC TTAAATAAAATTTGTTTCTAAATTTC

 ${\tt MSSRKQGSQPRGQQSAEEENFKKPTRSNMQRSKMRGASSGKKTAGPQQKNLEPALPGRWGGRSAENPPSGSVRKTRKNKQKTPGNGDGGSTSEAPQPPRKKRARADPTVESEEAFKNRMEVKVKIPEELKPWLVEDWDLVTRQKQLFQLPAKKNVDAILEEYANCKKSQGNVDNKEYAVNEVVAGIKEYFNVMLGTQLLYKFERPQYAEILLAHPDAPMSQVYGAPHLLRLFVRIGAMLAYTPLDEKSLALLLGYLHDFLKYLAKNSASLFTASDYKVASAEYHRKAL}$

TTGGTCTAAGACATGGGCTGACAAACTTTTTCCATAAAGGGCCAGAAAGTAAATATTTCAGGCTTTGTGGGATAT ${\tt CTATTTATGATTTATTTACTCCTAGTATTATTTCATCTTTTATACAGGTTATTAAGGTTAGTATTGCTGCATAA}.$ CAAATTACTCCAAAATTTAATCATTTATATTCAAGAAGAGTTCAGCTGCTAGGTTCTTATTTTGGGACTCTCATG ATGCTGAGGTCAAGATGCCAGCTGGAGGCCAGGCGCCGCAGCTCACGCCTGTAATCCCAGCGTTTTGGGAGGCCA GGGGCCTCCCAAATTCAAAAGGAAGAGACAAAGTCCACATCTGTCAATGCGAAGAATGGAAAGGTCACATATCAT ATGTGGAGCGGGACATAACAACTTCGGAAATTAAATCTCTTCCCCAGGTCAGTGTGCGGGCCTTCCACGCTGCCA GCGGAACACTGGAATGGCGGAAGGGGAACGGGTACGGCAGGGGGAAAGGCTGGGGGTGGGGTCGAGTCGA GGGAAGCTGGCCCGAGTGTGGACAGAGATGGCGGTCTGCGCGTCTGTTGTTCCCAGCGCTCTGCGAAGCCTGAAA AGGAGGAGCAACCTGTCCAGAATCCCCGCAGGTCCGTGAAAGACAGGAAAAGGAGGGGAAATCTCGACATGGAAA AACTCTACAGTGAAAATGAAGGAATGGCTTCAAACCAAGGAAAGATGGAAAATGAAGAACAGCCACAAGACGAGA GAAAGCCAGAAGTAACTTGTACTCTGGAAGACAAGAAGTTAGAAAACGAGGGAAAGACAGAAAACAAGGGCAAAA CAGGAGATGAGGAAATGTTAAAGGATAAAGGAAAGCCAGAGAGTGAGGGAGAGGCAAAAGAAGGAAAGTCAGAGA AAGGAGAGCCAGGGAGTGAAACAAGGGCTGCAGGAAAGCCCCCAGCTGAGGATGATGTACCCAGGAAAGCCAAAA GAAAAACTAATAAGGGGCTGGCTCATTACCTCAAGGAGTATAAAGAGGCCATACATGATATGAATTTCAGCAATG AGGACATGATAAGAGAATTTGACAATATGGCTAAGGTGCAGGATGAGAAGAGAAAAAGCAAACAGAAATTGGGGG CGTTTTTGTGGATGCAAAGAAATTTACAGGACCCCTTCTACCCTAGAGGTCCAAGGGAATTCAGGGGTGGCTGCA GGGCCCCACGAAGGGACATTGAAGACATTCCTTATGTG<u>TAG</u>TGTCCCTGGCAGGCCATTTACCAGGCCATGTGCTT TAACGTTACGGTAATACTTTACTTTAGGCATCCCTCCTGTTGCTAGCAGCCTTTTGACCTATCTGCAATGCAGTG TTCTCAGTAGGAAATGTTCATCTGTTACATGGAAAAAATGTTGATGGTGCATTGTAAAAATTAAAAAACACAACTT GCAGAACCAAAAAAA

MPAGGQAPQLTPVIPAFWEARGLPNSKGRDKVHICQCEEWKGHISYVERDITTSEIKSLPQVSVRAFHAASGTLE WRKGNGYGRGKGWGWGRVESREAGPSVDRDGGLRVCCSQRSAKPEKEEQPVQNPRRSVKDRKRRGNLDMEKLYSE NEGMASNQGKMENEEQPQDERKPEVTCTLEDKKLENEGKTENKGKTGDEEMLKDKGKPESEGEAKEGKSEREGES EMEGGSEREGKPEIEGKPESEGEPGSETRAAGKRPAEDDVPRKAKRKTNKGLAHYLKEYKEAIHDMNFSNEDMIR EFDNMAKVQDEKRKSKQKLGAFLWMQRNLQDPFYPRGPREFRGGCRAPRRDIEDIPYV

 $\texttt{CAGGATGACAGCTGGAGA} \underline{\textbf{ATG}} \\ \texttt{GAGTCAGTTTTATCCAAGTATGAAGATCAGATTACTATTTTCACTGACTACCTA} \\$ GAAGAATATCCAGATACAGATGAGCTGGTATGGATCTTAGGGAAGCAGCATCTCCTTAAAACAGAAAAATCTAAG TCATCAGATGCTGGTTGGGGATGTATGCTACGCTGTGGACAGATGATGCTGGCTCAAGCCCTTATCTGTAGACAC TTGGGAAGGGACTGGAGCTGGGAGAAACAAAAAGAACAACCCAAAGAATACCAACGCATCCTACAGTGCTTCTTA GATAGAAAAGATTGTTGCTACTCTATCCATCAAATGGCACAAATGGGTGTAGGAAAGGGAAATCAATTGGAGAA TATGTTTCAATGGATAACACAGTGGTCATTGAAGATATCAAAAAAATGTGCCGTGTCCTTCCCTTGAGTGCTGAC ACAGCTGGTGACAGGCCTCCCGATTCTTTAACTGCTTCAAACCAGAGTAAGGGCACCTCTGCCTACTGCACAGCC AAAGAGTGTTTTAAGATGCCACAGTCTTTAGGGGCATTAGGAGGAAAACCAAATAACGCGTATTATTTCATAGGA TTCTTAGGTGACGAGCTCATCTTCTTGGACCCTCATACAACCCAGACCTTTGTTGACACTGAAGAGAATGGAACG GTTAATGACCAGACTTTCCATTGCCTGCAGTCCCCACAGCGAATGAACATCCTAAACCTGGATCCTTCAGTTGCA TTGGGATTTTTCTGCAAAGAAGAAAAAGACTTTGATAACTGGTGTAGCCTTGTTCAGAAGGAAATTCTAAAGGAG AATTTAAGGATGTTTGAATTAGTTCAGAAACATCCATCACACTGGCCTCCCTTTGTACCTCCAGCCAAGCCAGAA GTGACAACCACTGGGGCAGAATTCATTGACTCTACTGAGCAACTGGAGGAGTTTGATCTGGAGGAAGATTTTGAG ATTCTGAGTGTGTAGAATCCTGGGAACTCAACTTGAAGGTCTG

MESVLSKYEDQITIFTDYLEEYPDTDELVWILGKQHLLKTEKSKLLSDISARLWFTYRRKFSPIGGTGPSSDAGW GCMLRCGQMMLAQALICRHLGRDWSWEKQKEQPKEYQRILQCFLDRKDCCYSIHQMAQMGVGEGKSIGEWFGPNT VAQVLKKLALFDEWNSLAVYVSMDNTVVIEDIKKMCRVLPLSADTAGDRPPDSLTASNQSKGTSAYCTAWKPLLL IVPLRLGINQINPVYVDAFKECFKMPQSLGALGGKPNNAYYFIGFLGDELIFLDPHTTQTFVDTEENGTVNDQTF HCLQSPQRMNILNLDPSVALGFFCKEEKDFDNWCSLVQKEILKENLRMFELVQKHPSHWPPFVPPAKPEVTTTGA EFIDSTEQLEEFDLEEDFEILSV

MAASAKKKNKKGKTISLTDFLAEDGGTGGGSTYVSKPVSWADETDDLEGDVSTTWHSNDDDVYRAPPIDRSILPT APRAAREPNIDRSRLPKSPPYTAFLGNLPYDVTEESIKEFFRGLNISAVRLPREPSNPERLKGFGYAEFEDLDSL LSALSLNEESLSNRRIRVDVADQALDKDRDDPPFGRDRNRDSDKTDTDWRARPATDTFDDYPPRRGDDSFGDKL

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AAAGTTGCTAGCTGGGGGCAGAGACGCCACGCGGTTGCAGGAGTAAGAGATCCCTCTGTGGCGAATTGGCCAAC GGCTCCTTTCAACCCTGCCTCGTTGGTGGCCACTGGAGAAGCGCGGGGGGGCTCCCCCAGACAGCCGTGGGGACAA GTTAGAGCCAGCACTTTACCCCGGGCCTTGCGTGTAGCTTCCCCTCCCCTACTCTCGGTGCCCTGGTGTCTGGAG GGGGGTTGTGGGGGTTGCCCGCCTTACATGGTCCACCACCGGGCAACCCTCTGGGCTTGTGTTCCATCTCACT CTTGCTTCCTGTACTGTGGTCAAGGGGAACCACTGCATCATCTCCCGGTATAGCTACCAGAGTCTCCTGGACTGG CTCTATGGGGGCGTGGACCCCAGTTTTGCAGGCAATGGGGGCCCCGACTGTGCTGCCTTCCTCTTTGGCAGCAG CGGCTGCTGGAAAGTGTGGTGGTCCTGACCCTGGCTCTGTTGGAGATCCTGGTGGCCCTGCGGCACATCCTGAGG GAGAGCCTGAGCAAGAATCTGCTCTTAGTAGCCCTGTGCCTGACCTTCGGGGTGGAGGTGGGCTTTAAGTTCGCC ACCAAGACCGTCATCTACCTGCTCAACCCCTGTCACCTGGTCACCATGATGCATCTCCCCTTTGAATTGGAGATT TACTACATTCAGCATGTTATGCTCTACGTGGTACCCATCTACCTGCTTTGGAAAGGAGGTGCTTACACTCCAGAG CCCCTCAGCAGTTTCCGGTGGGCTCTTCTCTCAACTGGCCTCATGTTCTTTTATCACTTCAGCGTCTTGCAGATC CTCGGCCTGGTCACCGAAGTGAATTTGAACAACATGCTGTCCGGCCATCTCAGACCCATTCTACGGCCCCTGG TATCGCATCTGGGCCTCGGGACACCAGACTCTCATGACCATGACCCACGGGAAGCTGGTCATCCTGTTCTCATAC ATGGCTGGGCCCTTGTGTAAATATCTGCTGGATTTGCTCCGGCTTCCAGCCAAGAAAATAGAC<u>TGA</u>AGGTGCTTA TTTTTTTTTTTCCTCCCTGAGGAAGCAAGTCGTGACTTGACTTGGAGAACACCCAGTTCTTGATAAAATCATG GGAGAGGCAGTAGGATGTTTGGTGTATTTCTTTTTCCTCCTTTCTGTCCCTTTCTTCTACCACTCTTCCTTTCC CAGCTCTTCCCCCTACGATGTCTCCTTGAGCCTGGGGTGTAGTGCTGGGCGCTGGATTTTCCTCCTTCCCTTTGG CTCTCTCCTCAAACTTCATCGCATTCATAGAAGCTGCTTGCAGGGTCGCCGGGCTAACCAGGGTGATCGGCGAAC TTTACCGTACAGTACCTCAGTCTAGCTGTCAGATCACCCCTTTTGCTGTAGCCTCTGTTGAGGTTTTTATATTTG TGATCATTGGTAATTCAGTGTCCTATGAAGTGGGCACAGCTCCCCACAGAGAGCAAGTTGTCAGCAGGTCTCTGT GCACTGGTATTGGGGCAGGGCAGTGCCCTGGGGGTAAGCTAGGTGGCTCAGGGAGTGGCAGAAGGGCCATTTTTC CCTCTGCCAAAAAGACTTCCTTGGATTTTGTAGATGTTGACCCAGAGTCCTCTGTCCCCTCCTGAAGAGGATTTTC TTACTGGTTTCTACTGAAGGGGAGGTAGGGGAGGAGGAAAAAAGGACCATGTGTGATGCTGTTAGACAAGACACT GACGCTGATTATGGAGGGTCTCCTGCAGGCCCTTGTGGGCTCCTTGGCAAGGCCCCAGGCTGGGAAGGAGCTCCC CCCACTGCCCATCCTGCCCGCTTTGTGGCGGGTAGAGTCAGTGACAGGGAGGCAGCCCTCCTTTTGTGTATATAG AGTGAGCTGATTTGGGCTCAGGAAAACCTAGTCGCTTGTTGCTCTCGTCTGTGACATTTTTGTACACTGGTTTGC TTTGAAAACTCTTGCTTTCTTTTGGTGTCCATTTTGTGTTCTATTTTAAAGAATCTTTCATTTATATTGGTGTTA TTGTAGTGAAGAGAATGTGATAGGCTGATCTGTAATGGTTTCTGTCAGGAGCTTAGCAAATGCCTCTGCCCCTCT TCCCCTACCCCTGTCCTCAGTTCCCAGCTGGGATTGCTATGCACTGGGCAGACCCGTCACTGTCTCCCCTG AACCCCCACACAGTGGCTTCCCTTAGAACCAGTCTTTGTACTCTCCCTAAACAGCAGCAGGCTTAGGATTTTTGT CAGGCTGGTTCTTGCGTGCTCTGTGCCCCCACCAGTTTGCTCACCTCTTGGGGCATTTTGTAATGTGTTTTCTCT TACTTAGCATTCTGAAAAAAAAAAAAAAAAAAAAAAAA

MSRYSYQSLLDWLYGGVDPSFAGNGGPDCAAFLSWQQRLLESVVVLTLALLEILVALRHILRQTKEDGRGSPGSQ PEQVTQRPEEGKESLSKNLLLVALCLTFGVEVGFKFATKTVIYLLNPCHLVTMMHLPFELEIYYIQHVMLYVVPI YLLWKGGAYTPEPLSSFRWALLSTGLMFFYHFSVLQILGLVTEVNLNNMLCPAISDPFYGPWYRIWASGHQTLMT MTHGKLVILFSYMAGPLCKYLLDLLRLPAKKID

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 ${\tt \underline{ATG}} {\tt CCCCGCGGCCAACTTCTTCCTTGGACCCACAAGGAGGAACGACCCGGGTGCCGGCAAGAAGCCGCCGGGAA}$ ${\tt GCCCGCCCATTGGCACACGGAATCTCGGCAATTGCCAATTCGGCCTACTTACAAACCGCAAGGCTTGCCATTTT}$ GGCCCAACGGAACCTTCCCGGCCCAAGAACCCAGCTTGGCCCTTAACCCCCGTTTGCTTCCACGGGAAGGGGCAA ${\tt CCAAGCAAAATGCCCAAGGCCCCGAGCCCAGGGGTCCCTGCCGAAGGCCTCCGCTGGTCCCGCCCAGATCATGG}$ GCGCCACCAGGCTCCCGAGCCGTGGCTTCCTGTCCGGGAACGGCCCGGCGTCCTGGCTGCCAGCTAGTCCTGGC GCCTCTCTCTGGGGCTTCCACCGCCGACCCCGCGGCGGAGCCTGCTTCTCTCGGACCTCCAGAGACCTCGGATG $\tt CGTCCGAGCACCTGCCTAGTCCTGCCTGGTCCCCAGGACAGTCCCAAGCCACTCCTCCCCAGGCGAGCACAGC$ GAAGGCACCGGCAAGGGGCTGGGGGAAGAGCCCACGCCAGCCTACGTCACGCAGGAAGGGAGCCAGTGGCCACCC CAAACACACCTCTCCTCCTCACACCTGGCCTACGTCCAACTCTCCACGGCTCTGCCCAGAAGGCTGCACGACTTC TTGCCCACGTGCGCCTTCAAAACGGTAAGAGCTGCAACTGAACGTGTGAGACATGGTGCAGATAGGCTGAGAGGC GGCGGGAGAGATGCCCATGAACTCAAGTACCCGGACACGCCCTCCACTTCTACCACCACGAGTAACACCGCCCCC ${\tt AGGCCCCCAGGCAGAAATGAGCACCACGGGGAACGGCCCGCCTCCAAGACAACCTCGGGGACATGGACACAACAA}$ GACAGGGTGGCAAGTCTCAACAAGGCGGGTGCGCGCGTCTGAAGGCGTGCAGTGTGGCCGACGGAGCCTCCCGG AGCCCAGGCTCCCTGGCGGAGGCCTCCGCTGGTCCCGCCCAGATCATGGCCGCCACCAGGCTCCCGAGCCGTGGC TTCCTGTCCGGGAACGGCCCGGCGTCCTGGCTGTCCAGC<u>TAG</u>

MPRGQLSSLDPQGGTTRVPARSRREARAIGTRNLGNCQFGLLTNRKACHFGPTEPSRPKNPAWPLTPVCFHGKGQ PSKMPKAPEPRGPCRRPPLVPPRSWAPPGSRAVASCPGTARRPGCPASPGASLWGFHRPTPRRSLLLSDLQRPRM RPSTCPSPAWSPRTVPSHSSPGEHSEGTGKGLGEEPTPAYVTQEGSQWPPQTHLSSSHLAYVQLSTALPRRLHDF LPTCAFKTVRAATERVRHGADRLRGGGRDAHELKYPDTPSTSTTTSNTAPTGPLSRSPKPRARACAPPKTSGVPG RPPGRNEHHGERPASKTTSGTWTQQDRVASLNKAGARRLKACSVADGASRAEDPARPSPRLLPREGAPGKLPKAP SPGSLAEASAGPAQIMAATRLPSRGFLSGNGPASWLSS

 ${\tt MPMNSSTRTRPPLLPPRVTPPPRDRSRGPPSQGRKEERPGARPAAAGTGPMATELSTGSRPSSHRRRAVWPTEPP} \\ {\tt GPRTQLGRHPGCSHGKGHQANCPRPRAQAPWRRPPLDFLPTCAFKTGKGLRTPKDKRGPRKAPRQK} \\$

 ${\tt MADEKPKEGVKTENNDHINLKVAGQDGSVVQFKIKRHTPLSKLMKAYCERQGLSVRQIRFRFDGQPINETDTPAQLEMEDEDTIDVFQQQTGGVY}$

GCGCACCTTGCCCTGGTCCATCGCTGCCGCCTCCTTCTTCTGCAGCTCCTGGTGCTGCTTGTGTGCTCGTTTG
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TCATACACATGGCAGAAACTGGATCCTGGCAGCGAGGAGCCCAGATGCTGGTTCGAGAGTACTTTTCCTGGGAG
GG

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ATCTTTAAATGGATGAGATGGCTACCACTCAGATTTCCAAAGATGAGCTTGATGAACTCAAAGAGGCCTTTGCAA AAGTTGATCTCAACAGCAACGGATTCATTTGTGACTATGAACTTCATGAGCTCTTCAAGGAAGCTAATATGCCAT TACCAGGATATAAAGTGAGAGAAATTATTCAGAAACTCATGCTGGATGGTGACAGGAATAAAGATGGGAAAAATAA GTTTTGACGAATTTGTTTATATTTTTCAAGAGGTAAAAAGTAGTGATATTGCCAAGACCTTCCGCAAAGCAATCA ACAGGAAAGAAGGTATTTGTGCTCTGGGTGGAACTTCAGAGTTGTCCAGCGAAGGAACACAGCATTCTTACTCAG AGGAAGAAAATATGCTTTTGTTAACTGGATAAACAAAGCTTTGGAAAATGATCCTGATTGTAGACATGTTATAC CAATGAACCCTAACACCGATGACCTGTTCAAAGCTGTTGGTGATGGAATTGTGCTTTGTAAAATGATTAACCTTT CAGTTCCTGATACCATTGATGAAAGAGCAATCAACAAGAAGAAACTTACACCCTTCATCATTCAGGAAAACTTGA ACTTGGCACTGAACTCTGCTTCTGCCATTGGGTGTCATGTTGTGAACATTGGTGCAGAAGATTTGAGGGCTGGGA AACCTCATCTGGTTTTGGGACTGCTTTGGCAGATCATTAAGATCGGTTTGTTCGCTGACATTGAATTAAGCAGGA ATGAAGCCTTGGCTGCTTTACTCCGAGATGGTGAGACTTTGGAGGAACTTATGAAATTGTCTCCAGAAGAGCTTC TGCTTAGATGGGCAAACTTTCATTTGGAAAACTCGGGCTGGCAAAAAATTAACAACTTTAGTGCTGACATCAAGG TTAACATGTCAGGTTTCAATGAAACAGATGATTTGAAGAGAGCTGAGAGTATGCTTCAACAAGCAGATAAATTAG GTTGCAGACAGTTTGTTACCCCTGCTGATGTTGTCAGTGGAAACCCCAAACTCAACTTAGCTTTCGTGGCTAACC TGTTTAATAAATACCCAGCACTAACTAAGCCAGAGAACCAGGATATTGACTGGACTCTATTAGAAGGAGAAACTC GTGAAGAAGAACCTTCCGTAACTGGATGAACTCTCTTGGTGTCAATCCTCACGTAAACCATCTCTATGCTGACC TGCAAGATGCCCTGGTAATCTTACAGTTATATGAACGAATTAAAGTTCCTGTTGACTGGAGTAAGGTTAATAAAC CTCCATACCCGAAACTGGGAGCCAACATGAAAAAGCTAGAAAACTGCAACTATGCTGTTGAATTAGGGAAGCATC CTGCTAAATTCTCCCTGGTTGGCATTGGAGGGCAAGACCTGAATGATGGGAACCAAACCCTGACTTTAGCTTTAG TCTGGCAGCTGATGAGAAGATATACCCTCAATGTCCTGGAAGATCTTGGAGATGGTCAGAAAGCCAATGACGACA TCATTGTGAACTGGGTGAACAGAACGTTGAGTGAAGCTGGAAAATCAACTTCCATTCAGAGTTTTAAGGACAAGA AGAGTGGCAATCTAACAGAAGATGACAAGCACAATAATGCCAAGTATGCAGTGTCAATGGCTAGAAGAATCGGAG TGGGCAGGGGAATGAAGAGAGTGTAAAATAACCAATCTGAATAAAACAGCCATGCTCCCAGGTGCATGATTCGCA GGTCAGCTATTTCCAGGTGAAGTGCTTATGGCTTAAGGAACTCTTGGCCATTCAAAGGACTTTTCATTTTGATTA ACAGGACTAGCTTATCATGAGAGCCCTCAGGGGAAAGGGTTTAAGAAAAACAACTCCTCTTTCCCATAGTCAGAG TTGAATTTGTCAGGCACGCCTGAAATGTGCTCATAGCCAAAACATTTTACTCTCTCCTCCTAGAATGCTGCCCTT GACATTTCCCATTGCTGTATGTTATTTCTTGCTCTGTTATCTTTTGCCCTCTTAGAATGTCCCTCTTTGGGACT **AACTATGGTCAGAGCGTATTTGGATATGAGTATCCTTTGCTTATCTTTGTAGTACTGAAAATTTGCCGAAGTAAC** TGGCTGTGCAGAATGTAATAGAAGCTTTTCTTATTCTTTATTCTTAAGATCAGTATCTTTTACAGTATTCTTT CTACATGATCCTTTTTTGTACATTTAAGAATATTTTTGATTATATAAACAAGACTGCTGATTTTGCTACTTTTTT TAAGGGGTCTTCAAGTAAGTAAACATACATCGTAGCTAGAAGAAAAATGTACCTTAAATTTGCATCTTCCCTCT CATACCCAAGCTGTAAACAATTGAAATATTTTGTCTTAAATCACTTGGTTCAATACATGCTTATTTGTTTTAAAA CCTGTATCATCAAACTCTCTCTCTAAATTTAAAATGCTGTTGAATATGATACTTTTGAGGAGAGAGTGTGCTCAG AACTTAGACGGGATTTGGTAGGCCAAGTATGCTAAGTGTACAATATATTTTTTAATTTTACACCTGAAACAAAGA AATGTGGTCACTAAAAATAAAGTATATGTAGGAATTAATGTACTCTTGCTTTGTCAAGCTGTTTGCTATAGT TTCCAAGGTATTATGTTACTCTAACTCTGAAAAGTGATGTAATCTGGTAGCAATGTAGTAGTTCAAATAAAGGCA TTTACATAAT

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 ${\tt TGCCAAGGCTCCAGCCGGGGCTCCGAGGCGAGAGGCTGC} \underline{{\tt ATG}} {\tt GAGTGGCCGGCGCGCTCTGCGGGCTGTG}$ AAATTTGAGTGTCTCTGTTGAAAACCTCTGCACAGTAATATGGACATGGAATCCACCCGAGGGAGCCAGCTCAAA AGAAGTACCCCTGAATGAGAGGATTTGTCTGCAAGTGGGGTCCCAGTGTAGCACCAATGAGAGTGAGAAGCCTAG CATTTTGGTTGAAAAATGCATCTCACCCCCAGAAGGTGATCCTGAGTCTGCTGTGACTGAGCTTCAATGCATTTG CTATTGGCACAGAAGCCTGGAAAAAATTCATCAATGTGAAAACATCTTTAGAGAAGGCCAATACTTTGGTTGTTC CTTTGATCTGACCAAAGTGAAGGATTCCAGTTTTGAACAACACAGTGTCCAAATAATGGTCAAGGATAATGCAGG AAAAATTAAACCATCCTTCAATATAGTGCCTTTAACTTCCCGTGTGAAACCTGATCCTCCACATATTAAAAACCT CTCCTTCCACAATGATGACCTATATGTGCAATGGGAGAATCCACAGAATTTTATTAGCAGATGCCTATTTTATGA AGTAGAAGTCAATAACAGCCAAACTGAGACACATAATGTTTTCTACGTCCAAGAGGCTAAATGTGAGAATCCAGA ATTTGAGAGAAATGTGGAGAATACATCTTGTTTCATGGTCCCTGGTGTTCTTCCTGATACTTTGAACACAGTCAG AATAAGAGTCAAAACAAATAAGTTATGCTATGAGGATGACAAACTCTGGAGTAATTGGAGCCAAGAAATGAGTAT AGGTAAGAAGCGCAATTCCACACTCTACATAACCATGTTACTCATTGTTCCAGTCATCGTCGCAGGTGCAATCAT AGTACTCCTGCTTTACCTAAAAAGGCTCAAGATTATTATATTCCCTCCAATTCCTGATCCTGGCAAGATTTTTAA AGAAATGTTTGGAGACCAGAATGATGATACTCTGCACTGGAAGAAGTACGACATCTATGAGAAGCAAACCAAGGA ${\tt GGAAACCGACTCTGTAGTGCTGATAGAAAACCTGAAGAAAGCCTCTCAG\underline{\textbf{TGA}}{\tt TGGAGATAATTTATTTTTACCTT}$ CACTGTGACCTTGAGAAGATTCTTCCCATTCTCCATTTGTTATCTGGGAACTTATTAAATGGAAACTGAAACTAC TGCACCATTTAAAAACAGGCAGCTCATAAGAGCCACAGGTCTTTATGTTGAGTCGCGCACCGAAAAACTAAAAAT ANTGGGCGCTTTGGAGAAGAGTGTGGAGTCATTCTCATTGAATTATAAAAGCCAGCAGGCTTCAAACTAGGGGAC AAAGCAAAAAGTGATGATAGTGGTGGAGTTAATCTTATCAAGAGTTGTGACAACTTCCTGAGGGATCTATACTTG CTTTGTGTTCTTTGTGTCAACATGAACAAATTTTATTTGTAGGGGAACTCATTTGGGGTGCAAATGCTAATGTCA AACTTGAGTCACAAAGAACATGTAGAAAACAAAATGGATAAAATCTGATATGTATTGTTTTGGGATCCTATTGAAC CATGTTTGTGGCTATTAAAACTCTTTTAACAGTCTGGGCTGGGTCCGGTGGCTCACGCCTGTAATCCCAGCAATT TGGGAGTCCGAGGCGGGCGGATCACTCGAGGTCAGGAGTTCCAGACCAGCCTGACCAAAATGGTGAAACCTCCTC TCTACTAAAACTACAAAAATTAACTGGGTGTGGTGGCGCGTGCCTGTAATCCCAGCTACTCGGGAAGCTGAGGCA GGTGAATTGTTTGAACCTGGGAGGTGGAGGTTGCAGTGAGCAGAGATCACCACCTGCACTCTAGCCTGGGTGAC TTCCCTTCGACAGCATTTTCCTCTGCTTTGAAAGCCCCAGAAATCAGTGTTGGCCATGATGACAACTACAGAAAA ACCAGAGGCAGCTTCTTTGCCAAGACCTTTCAAAGCCATTTTAGGCTGTTAGGGGCAGTGGAGGTAGAATGACTC CTTGGGTATTAGAGTTTCAACCATGAAGTCTCTAACAATGTATTTTCTTCACCTCTGCTACTCAAGTAGCATTTA $\verb|CTGTGTCTTTGGTTTGTGCTAGGCCCCCGGGTGTGAAGCACAGACCCCTTCCAGGGGTTTACAGTCTATTTGAGA| |$ CTCCTCAGTTCTTGCCACTTTTTTTTTTAATCTCCACCAGTCATTTTTCAGACCTTTTAACTCCTCAATTCCAAC ACTGATTTCCCCTTTTGCATTCTCCCTTCCTTCCTTGTAGCCTTTTGACTTTCATTGGAAATTAGGATGTA AATCTGCTCAGGAGACCTGGAGGAGCAGAGGATAATTAGCATCTCAGGTTAAGTGTGAGTAATCTGAGAAACAAT GACTAATTCTTGCATATTTTGTAACTTCCATGTGAGGGTTTTCAGCATTGATATTTGTGCATTTTCTAAACAGAG TTACAAGATGGGTCCAGGATTCCTCTTTTCTCTGCCATAAATGATTAAATAACTTTTTGTGTCTTACATTGG TAGCCAGCCAGCCAAGGCTCTGTTTATGCTTTTGGGGGGGCATATATTGGGTTCCATTCTCACCTATCCACAAAC ATATCCGTATATATCCCCTCTACTCTTACTTCCCCCAAATTTAAAGAAGTATGGGAAATGAGAGGCATTTCCCCC ACCCCATTTCTCTCCTCACACACAGACTCATATTACTGGTAGGAACTTGAGAACTTTATTTCCAAGTTGTTCAAA CATTTACCAATCATATTAATACAATGATGCTATTTGCAATTCCTGCTCCTAGGGGAGGGGGAGATAAGAAACCCTC ACTCTCTACAGGTTTGGGTACAAGTGGCAACCTGCTTCCATGGCCGTGTAGAAGCATGGTGCCCTGGCTTCTCTG AGGAAGCTGGGGTTCATGACAATGGCAGATGTAAAGTTATTCTTGAAGTCAGATTGAGGCTGGGAGACAGCCGTA GTAGATGTTCTACTTTGTTCTGCTGTTCTCTAGAAAGAATATTTGGTTTTCCTGTATAGGAATGAGATTAATTCC TTTCCAGGTATTTTATAATTCTGGGAAGCAAAACCCATGCCTCCCCTAGCCATTTTTACTGTTATCCTATTTAG ATGGCCATGAAGAGGATGCTGTGAAATTCCCAACAAACATTGATGCTGACAGTCATGCAGTCTGGGAGTGGGGAA

6787/6881 FIGURE 6270B

GTGATCTTTTGTTCCCATCCTCTTCTTTTAGCAGTAAAATAGCTGAGGGAAAAGGAGGAGGAAAAGGAAGTTATGG
GAATACCTGTGGTGGTTGTGATCCCTAGGTCTTGGGAGCTCTTGGAGGTGTCTGTATCAGTGGATTTCCCATCCC
CTGTGGGAAATTAGTAGGCTCATTTACTGTTTTAGGTCTAGCCTATGTGGATTTTTCCTAACATACCTAAGCAA
ACCCAGTGTCAGGATGGTAATTCTTATTCTTTCGTTCAGTTAAGTTTTTCCCTTCATCTGGGCACTGAAGGGATA
TGTGAAACAATGTTAACATTTTTGGTAGTCTTCAACCAGGGATTGTTTCTGTTTAACTTCTTATAGGAAAGCTTG
AGTAAAATAAATATTGTCTTTTTGTATGTCAAGCGGGCCCGCCACCGCGGTGGAAACTCCAGCTT

MEWPARLCGLWALLLCAGGGGGGGAAPTETQPPVTNLSVSVENLCTVIWTWNPPEGASSNCSLWYFSHFGDKQD KKIAPETRRSIEVPLNERICLQVGSQCSTNESEKPSILVEKCISPPEGDPESAVTELQCIWHNLSYMKCSWLPGR NTSPDTNYTLYYWHRSLEKIHQCENIFREGQYFGCSFDLTKVKDSSFEQHSVQIMVKDNAGKIKPSFNIVPLTSR VKPDPPHIKNLSFHNDDLYVQWENPQNFISRCLFYEVEVNNSQTETHNVFYVQEAKCENPEFERNVENTSCFMVP GVLPDTLNTVRIRVKTNKLCYEDDKLWSNWSQEMSIGKKRNSTLYITMLLIVPVIVAGAIIVLLLYLKRLKIIIF PPIPDPGKIFKEMFGDQNDDTLHWKKYDIYEKQTKEETDSVVLIENLKKASQ

GACCCACGCGTCCGGGGAGGAGAAAGTGGCGAGTTCCGGATCCCTGCCTAGCGCGGCCCAACCTTTACTCCAGAG ${\tt ATTTCACGTCGCCGCTCAACCTGCTGCTGCTTGCCTCTGCATCTTCCTGCTCTACAAGATCGTGCGCGGGGAC}$ ${\tt CCCGCCGAGCTGCGGCGCTTCGACGGCGTCCAGGACCCGCGCATACTCATGGCCATCAACGGCAAGGTGTTCGAT}$ GTGACCAAAGGCCGCAAATTCTACGGGCCCGAGGGGCCGTATGGGGTCTTTGCTGGAAGAGATGCATCCAGGGGC CAGGAGACTCTGAGTGACTGGGAGTCTCAGTTCACTTTCAAGTATCATCACGTGGGCAAACTGCTGAAGGAGGGG ${\tt GAGGAGCCCACTGTGTACTCAGATGAGGAAGAACCAAAAGATGAGAGTGCCCGGAAAAATGAT}{{\tt TAA}}{\tt AGCATTCAG}$ TGGAAGTATATCTATTTTTGTATTTTGCAAAATCATTTGTAACAGTCCACTCTGTCTTTAAAACATAGTGATTAC $\tt CTTAGAATGCATGATGTGTTGTGTCACAAATCCAGAAAGTGAACTGCAGTGCTGTAATACACATGTTAATAC$ TGTTTTCTTCTATCTGTAGTTAGTACAGGATGAATTTAAATGTGTTTTTCCTGAGAGACAAGGAAGACTTGGGT ATTTCCCAAAACAGGTAAAAATCTTAAATGTGCACCAAGAGCAAAGGATCAACTTTTAGTCATGATGTTCTGTAA AGACAACAAATCCCTTTTTTTTTCTCAATTGACTTAACTGCATGATTTCTGTTTTATCTACCTCTAAAGCAAATC TGCAGTGTTCCAAAGACTTTGGTATGGATTAAGCGCTGTCCAGTAACAAAATGAAATCTCAAAACAGAGCTCAGC TGCAAAAAAGCATATTTTCTGTGTTTCTGGACTGCACTGTTGTCCTTGCCCTCACATAGACACTCAGACACCCCTC GGCTGGCCTAAAAACCTAAATATATGATGAAGATTGTAGGACTGTCTTCCCAAGCCCCATGTTCATGGTGGGGCA TGTTTGCTCTCCTAAGAGCCTTCATGCACCCCCTGAACCACGAGGAAACAGTACAGTCGCTAGTCAAGTGGTTT TTAAAGTAAAGTATATTCATAAGGTAACAGTTATTCTGTTGTTATAAAACTATACCCACTGCAAAAGTAGTAGTC AAGTGTCTAGGTCTTTGATATTGCTCTTTTGGTTAACACTAAGCTTAAGTAGACTATACAGTTGTATGAATTTGT GTGTTTTATGATTTTACCTCAAATCAGAAAACAAAATGATGTGCTTTGGTCAGTTAATAAAAATGGTTTTACCCA СТАААААААААААА

 ${\tt MAAEDVVATGADPSDLESGGLLHEIFTSPLNLLLLGLCIFLLYKIVRGDQPAASGDSDDDEPPPLPRLKRRDFTP} \\ {\tt AELRRFDGVQDPRILMAINGKVFDVTKGRKFYGPEGPYGVFAGRDASRGLATFCLDKEALKDEYDDLSDLTAAQQ} \\ {\tt ETLSDWESQFTFKYHHVGKLLKEGEEPTVYSDEEEPKDESARKND} \\ {\tt MAAEDVVATGADPSDLESGGLLHEIFTSPLNLLLLGLCIFLLYKIVRGDQPAASGDSDDDEPPPLPRLKRRDFTP} \\ {\tt AELRRFDGVQDPRILMAINGKVFDVTKGRKFYGPEGPYGVFAGRDASRGLATFCLDKEALKDEYDDLSDLTAAQQ} \\ {\tt ETLSDWESQFTFKYHHVGKLLKEGEEPTVYSDEEEPKDESARKND} \\ {\tt MAAEDVVATGADPSDLESGGLATFCLDKEALKDEYDDLSDLTAAQQ} \\ {\tt MAAEDVATGADPSDLESGGLATFCLDKEALKDEYDDLSDLTAAQQ} \\ {\tt MAAEDVATGADPSDLAAGADPSDLA$

 $\tt CCGCAGCCGGAGTCAAAGCCGGTTCCCGGCCCAGTCCCGTCCTGCAGCAGTCTGCCTCTTTCAACATGAC$ AGATGCCGCTGTGTCCTTCGCCAAGGACTTCCTGGCAGGTGGAGTGGCCGCAGCCATCTCCAAGACGGCGGTAGC TGTCATCAGATACTTCCCCACCCAGGCTCTTAACTTCGCCTTCAAAGATAAATACAAGCAGATCTTCCTGGGTGG TGTGGACAAGAGAACCCAGTTTTGGCTCTACTTTGCAGGGAATCTGGCATCGGGTGGTGCCGCAGGGGCCACATC ${\tt CCTGTGTTTTGTGTACCCTCTTGATTTTGCCCGTACCCGTCTAGCAGCTGATGTGGGTAAAGCTGGAGCTGAAAG}$ GGAATTCCGAGGCCTCGGTGACTGCCTGGTTAAGATCTACAAATCTGATGGGATTAAGGGCCTGTACCAAGGCTT TAACGTGTCTGTGCAGGGTATTATCATCTACCGAGCCGCCTACTTCGGTATCTATGACACTGCAAAGGGAATGCT ${\tt AGGCACGCTTGACTGCTGGCGGAAGATTGCTCGTGATGAAGGAGGCAAAGCTTTTTTCAAGGGTGCATGGTCCAA}$ TGTTCTCAGAGGCATGGGTGCTTTTGTGCTTGTCTTGTATGATGAAATCAAGAAGTACACATAAGTTATTTC CTAGGATTTTTCCCCCTGTGAACAGGCATGTTGTATTATATAACATATCTTGAGCATTCTTGACAGACTCCTGGC TGTCAGTTTCTCAGTGGCAACTATTTACTGGTTGAAAATGGGAAGCAATAATATTCATCTGACCAGTTTTCTCTT TTGGAGAAATAAAAATATCTAAAAT

GCGACCCTCTTCTTGGCGTAGAGTTTTCAGATTGCTCTTGGGAATCATGCCGAAAGTAGTGTCTCGGTCAGTAGT CTGCTCTGACACTCGGGACCGGGAGGAATATGACGACGGCGAGAAGCCCCTCCATGTTTACTACTGTTTGTGCGG CCAGATGGTCCTAGTGCTGGACTGCCAGTTAGAGAAATTGCCCATGAGGCCCCGGGACCGGTCCCGTGTGATTGA TGCTGCCAAACATGCCCATAAGTTTTGTAACACAGAAGATGAGGAGACTATGTATCTGCGGAGACCTGAAGGCAT TGAACGACAGTACAGGAAGAATGTGCAAAGTGTGGACTGCCGCTCTTCTACCAATCCCAGCCAAAGAATGCTCC TGTTACCTTCATTGTGGATGGAGCAGTAGTCAAGTTTGGCCAGGGCTTTGGGAAAACGAACATATATACTCAGAA ACAAGAGCCTCCTAAGAAGGTGATGATGACCAAACGGACCAAAGACATGGGCAAGTTCAGTTCTGTCACCGTGTC TACCATTGATGAAGAGGAAGAGGAGATTGAGGCTAGGGAAGTTGCTGACTCATATGCACAGAATGCCAAAGTGAT GAAAATGAAGGGGACCTTGATTGACAACCAGTTCAAATAACCAGGCCTTTTTCTAAGCCCTAGACTAGAGGCAAG CATTTAGATCAGGAGGCAAAGTAATTTCTTGATTACATAGACGGATTCCTATTTATGCCCTAGCAGAAGGCTTTA $\verb|CTCCGCCTCCCGGGTTCAAGCAGTTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGATTACAGGCATGTGCCACCAC| \\$ GCCTGGGCAACATGGTGAAACCCTGTCTCTACTAAAATACAAAAGAAATTAGCCAGGTGTGGCGGCATACCCCTG TAGTCACGGCTACTTGGGAGGCAGAGGCAGGAGAATTGCTTGAACTCGGGAGGTGGAGGTTGCAGTGAGCTGAGA AAAGTAACCCAAGGGAGGGAGCTACCCTCTAGTCGGGCAGCTGATACTGCTTCCTTGCATGGATACATGGGAGGG AGACGTTATAGATTAAGAAATGATAGCAAGATAAACAAAATGATTTGTTGGGTATCTTTTACTTTACATTTGTTA TTTGCAGAGGAGTGTTGTATATATAGATGTTATTTTATGTCACACTGCTTCAATGATACCTATATCCATGTGTTT GTATCCATGTTTTTATCCATTCAACTGTATTAAAAGGTGTTGGGACAGG

GAAGAACTGGAACTGGGCTGGCCATAGGGGGAAGCGGCGCGTTAAATCCGCCCCCTCTCCATACCCTACTTTCAA ACTTGGTCGCCCCGAAGTGTAACACTTTCTCTTTGTCGGAGGAGCTCCTCTGTTTCCTGTGCAGTAGCTCCCGT AGGTTGCCGAACTGTCCCCCTGGCTGGACATGTGGGGTTTGACAGCTTGCCTGACCAGCTGGTGAATAAGTCCGT CAGCCAGGGCTTCTGCTTCAACATCCTGTGCGTGGGAGAGACAGGTTTGGGCAAGTCCACCCTCATGGACACCCT CCTCCAAGAGAGCAACGTGAGGCTAAAGCTCACGATCGTTAGCACAGTTGGCTTTGGGGACCAGATCAACAAAGA GGACAGCTACAAGCCTATCGTGGAATTCATCGATGCACAATTCGAGGCCTACCTGCAGGAAGAGCTAAAGATCCG AAGAGTGCTACACCCTACCATGACTCCCGAATCCATGTCTGCTTGTATTTCATTGCCCCCACGGGTCATTCCCT GAAGTCTCTGGACCTAGTGACTATGAAGAAGCTGGACAGTAAGGTGAACATCATCCCCATCATTGCCAAAGCAGA TGCCATTTCGAAGAGTGAGCTAACAAAGTTCAAAATCAAAATCACCAGCGAGCTTGTCAGCAACGGAGTCCAGAT CTATCAGTTTCCTACAGATGATGAGTCGGTGGCAGAGATCAATGGAACCATGAACGCCCACCTGCCGTTTGCTGT CATTGGCAGCACAGAAGAACTGAAGATAGGCAACAAGATGATGAGGGCGCGGCAGTATCCTTGGGGCACTGTGCA GGTTGAAAACGAGGCCCACTGCGACTTTGTGAAGCTGCGGGAGATGCTGATTCGGGTCAACATGGAGGATCTGCG GGAGCAGACCCACACCCGGCACTATGAGCTGTATCGCCGCTGTAAGCTGGAGGAGATGGGCTTCAAGGACACCGA CCCTGACAGCAAACCCTTCAGTTTACAGGAGACATATGAGGCCAAAAGGAACGAGTTCCTAGGGGAACTCCAGAA AAAAGAAGAGGAGATGAGACAGATGTTCGTCCAGCGAGTCAAAGAAGAAGAAGCGGAGCTCAAAGAGAGCAGAAAA AGAGCTGCACGAGAAGTTTGACCGTCTGAAGAAACTGCACCAGGACGAGAAGAAGAAACTGGAGGATAAGAAGAA CCCGCTACAGCTGGACTGGACTCCATTTAGCCTTTTAAGCCGAGGTTCCTATTTTAACTGACAGCTTTCCTTTGG TTTGATCACTTACTTTCAAAGCACACAGTCAAACAAGGTTATGCCAAATTTCCAGGCCTTTTTGAAGTATTGAGA AGGGGAAGGGGATTTCTCACTTCAATTATAGATCATAATAGGAAGCAAAAAGAAAAAATGAAAAGCAAACATAT GACCAGAGCAAGTATGAAGGTGATGCTGCCAAAGCACAAGCCAGTTTCTTGGGAAAATTCAAGTTACAGTGGAGT AGATACTCAGCCAGTAGCTCAGAGAGATGCTGAGTTAGGCCTGTCAGGTCTCCTTGGGAAAGGCTTCATATTTGC CCACTTCCCCACACCGCCGCCTGGTAATTATTTGCATTACAAACCGGAGGCGCCCTCATTTGCATTTGTGTACAG ATTAACTAGTTAAGGCTTGAGAAGCTCTGAATAATTCAAAAGTATTAGACCCACACAGCCTTGGAGAGACCTTCA GGAAATGAAGGCCCGGAGAAGGGAAGGGACTTGACCGAGGTCCCACTTCTGTTTCGAGGCAGAAGCCAGACTAAT TTTCATGCCTCCTGACTCCCAATCAGTTTCACAAAGGGATTCAATCTGTTTATATACGTTACATTCCTGG

MAATDIARQVGEGCRTVPLAGHVGFDSLPDQLVNKSVSQGFCFNILCVGETGLGKSTLMDTLFNTKFEGEPATHT QPGVQLQSNTYDLQESNVRLKLTIVSTVGFGDQINKEDSYKPIVEFIDAQFEAYLQEELKIRRVLHTYHDSRIHV CLYFIAPTGHSLKSLDLVTMKKLDSKVNIIPIIAKADAISKSELTKFKIKITSELVSNGVQIYQFPTDDESVAEI NGTMNAHLPFAVIGSTEELKIGNKMMRARQYPWGTVQVENEAHCDFVKLREMLIRVNMEDLREQTHTRHYELYRR CKLEEMGFKDTDPDSKPFSLQETYEAKRNEFLGELQKKEEEMRQMFVQRVKEKEAELKEAEKELHEKFDRLKKLH QDEKKKLEDKKKSLDDEVNAFKQRKTAAELLQSQGSQAGGSQTLKRDKEKKNNPWLCTE

MSSHKTFRIKRFLAKKQKQNRPIPQWIRMKTGNKIRYNSKRRHWRRTKLGL

ATGGACGTAGACACGAGCCTATTTCACCTCCGCTACCATAATCATCGCTATTCCCACCAGCGTCAAACTGACT
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TGTGGCCTAACCGGCATTGTACTAGCAAACTCATCATTAGACATCGTACTACACGACACATACTACGTCGTAGCT
CACTTCCATTACGTCCTATCAATAGGAGCTGTATTCGCCATCACAGGAGCCAATATTGTACCTATCACCATACTA
GTCTTTGCTGCCTGCAAGGCAGCAGTAGGCCTAGCCCTACTAGTCTCAATCTCTAACACATATGGCCTAGACTAC
GTACATAACCTAAGCCTACTCCAATGCTAA

MEEMKKTAIRLPKGKQKPIKTEWNSRCVLFTYFQGDISSVVDEHFSRALSNIKSPQELTPSSQSEGVMLKNDDSM SPNQWRYSSPWTKPQPEVPVTNRAANCNLHVPGPMAVNQFSPSLARRASVRPGELWHFSSLAGTSSLEPGYSHPF PARHLVPEPQPDGKREPLLSLLQQDRCLARPQESAARENGNPGQIAGSTGLLFNLPPGSVHYKKLYVSRGSASTS LPNETLSELETPGKYSLTPPNHWGHPHRYLQHL

6812/6881 FIGURE 6295A

GCTGTTTGGAGTGTACCGTCCTCAGTA ATG AATCCAGAAGAACAAATCGTGACATGGCTTATATCTTTGGGAGTTTTAGAGTCCCCTAAAAAGACCATCTGTGATCCGGAGGAGTTTTTAAAGTCCTCGCTGAAAAATGGGGTAGTTCTG TGCAAACTGATCAACAGACTCATGCCTGGGCTCTGTGGAAAAGTTTTGTCTGGATCCCCAAACTGAAGCTGACTGC ATCAACAACATCAATGACTTCCTGAAAGGATGTGCAACCCTCCAAGTGGAAATATTTGATCCTGATGACCTTTAT TCAGGGGTCAATTTCTCCAAGGTACTGAGTACTCTTTTAGCTGTCAACAAAGCAACAGAAGATCAGCTATCAGAA AGACCATGTGGACGTTCCTCTTCTCTTAGTGCTGCTAATACTTCTCAGACAAACCCACAGGGAGCAGTTTCTAGC ACAGTTTCAGGGCTGCAAAGGCAGTCAAAGACAGTGGAGATGACGGAAAATGGAAGTCATCAGTTGATAGTAAAA GCAAGATTCAACTTTAAGCAGACTAATGAGGATGAACTGTCAGTTTGTAAGGGGGGACATCATTTACGTCACACGA GTTGAAGAAGGAGGCTGGTGGGAAGGCACATTAAATGGGAGAACAGGCTGGTTCCCCAGTAATTATGTCCGTGAA ATTAAATCCAGTGAGAGACCTCTCCCCCAAAAGCCGTCAAAGGATTTGAAACTGCTCCACTTACCAAGAATTAT TATACTGTGGTGTTACAGAACATCCTGGACACTGAAAAAGAATATGCTAAAGAACTTCAGTCTCTTGTTACT TACTTAAGACCCCTGCAGTCCAATAACAATCTGAGTACTGTGGAGGTTACATCTTTACTGGGGAAACTTCGAGGAA GTATGCACATTCAACAGACACTCTGCCAAGCCTTGGAAGAATGTTCAAAGTTTCCAGAAAACCAGCACAAAGTA GGAGGTTGTCTACTGAGTCTCATGCCTCATTTTAAATCTATGTATCTGGCTTACTGTGCAAACCATCCTTCAGCT GTAAATGTGCTCACTCAGCACAGTGATGAGTTGGAACAATTCATGGAAAATCAAGGTGCATCGAGCCCAGGTATC CTCATTTTAACAACAAACCTCAGCAAACCATTCATGCGACTGGAGAAATATGTTACTCTCTTGCAAGAGTTAGAA CGGCATATGGAGGATACTCATCCAGATCATCAGGATATTCTGAAAGCAATCGTAGCATTCAAAACTCTCATGGGG CAATGTCAAGATCTGAGGAAGAGAAAACAGCTGGAGTTACAGATACTGTCCGAACCTATTCAGGCATGGGAAGGA GAAGATATTAAAAACTTGGGAAATGTGATTTTTATGTCACAAGTAATGGTGCAGTATGGAGCATGTGAGGAAAAA GAGGAGCGGTACCTTATGTTATTTTCAAATGTCCTGATAATGTTATCTGCAAGTCCTCGGATGAGTGGCTTTATC TATCAGGGAAAAATACCAATAGCAGGAACGGTGGTGACTAGATTAGATGAAATTGAAGGGAATGACTGCACATTT GAAATCACTGGTAACACAGTGGAGAATTGTGGTCCATTGTAACAACAACCAGGACTTCCAGGAATGGTTGGAG CAGCTGAACAGACTGATCAGAGGACCTGCCTCTTGCAGTTCATTATCCAAAACCTCATCGTCATCATGTAGTGCT CATTCTTCTTTTAGCTCTACCGGACAGCCCCGAGGACCCTTGGAGCCTCCTCAAATTATAAAACCGTGGAGTTTA AGTTGTCTACGACCTGCACCTCACCTTAGACCATCAGCAGCACTAGGTTATAAAGAGAGGATGTCTTATATCTTA AAGGAGTCTAGTAAAAGCCCTAAAACGATGAAGAAATTTCTTCATAAAAGGAAGACTGAGAGAAAACCATCGGAG GAGGAATATGTGATTAGGAAAAGTACAGCTGCTCTGGAAGAGGATGCTCAAATCCTTAAAGTGATCGAAGCCTAC TGCACCAGCGCAAATTTTCAACAAGGCCATGGCTCAAGTACTCGAAAAGATTCCATTCCACAAGTCCTACTCCCT GAGGAAGAGAAACTCATCATTGAAGAAACCAGAAGCAACGGCCAGACCATCATGGAAGAAAAGAGCCTTGTTGAT ACTGTTTACGCCTTGAAGGACGAGGTCAGAGAACTGAAGCAGGAAAATAAAAGAATGAAGCAATGCCTGGAAGAA GAACTGAAATCAAGAAGGGACCTAGAAAAGCTGGTGCGGAGGCTTTTGAAGCAAACAGATGAGTGTATTCGAGGC ${\tt GAGTCCAGTAGCAAGACCTCAATTCTTCCA} \underline{{\tt TAA}} {\tt CCATCACTGTGCCACTGGGTGGAGTGTGCCTTCAGGGCATCT}$ TGGCCTCAGAGTCTTTTCCATTCAGTAAGAAAGGAAAAGGGAATGCAGGCCAGTTACTTAAAAAGGTCTTCAGATT CAGCTGGCCAAGGCTTATTAAATGTGAACCCAACTTTTCCCCAGGGCTTTCCTGTACCTGCAAGCCTCTTAGTAC TTAATTTACCGAAGGCAAATCTTCCAGACTATGGCTTGAGTAGGATGAAAGACAAACACATCTGCCCAATGATCC AGCTGCCCTTCCTTAGACCATCACATGCCTCCCCTCAATCACAGGTTTTAAAATTACTGCCCTATGTTGTCTATA AGACCAAGAAAACTGTAGTACCCTTATTCCTTTTGTGTCATGTAAATTGTAACTCAGGGGGGCAGAAGCTCTGGT CACCÇACACCAACACCAAATCCATCAGCAAATTCTACTGGACAATCCTCCCTTTTAGTAGCAGAGTTGACCGCCT TTTCCCATTGCATGATAGGTTTCTTTCCCTCATTCTGCCTAGTGTGTAAGTTTTCTATTTCCCCAGTACTTTTAG CCAACCTTACCAAGTGGTGTAAACTAGTATGTATGTGCTTTGCTTACTTTTTAAAAAAATGTAGTTAGACTGT GAGGAGTTACTTTATGTACGTTGCATATTCAAACTGTGATGTTTTATCCTTCAAAACAATCTGCATTAAGAAGAT ATTGTGCCCTACTAGACAGCTTTCATTCACTTTATTACTCTCTCATATATGCTGTGAGAAGTTGTAATATTAATT GGCCTCTTTGGGTGGGACTCTAAGCAGTATTTGCAGAAATATGCTTCTGGTCCAACTTGTACATCCAGAACAAAA GGGCCCCTCTAGTAGCTGTGCTGGATTATTCAGGACTGATTAACTCAAGTTGCTCATTGAATCACATCATCCA

6813/6881 FIGURE 6295B

CTTTATCCCAGAAACTAGAACTGTGAGAAACCAGGTTTAGAAGACAGTCACAGAACAGCACACATCCAAATTCAG CGCCATTGAAAGTTGGCCTAAGGCTCAGTGCCACTCACCCCTCCCCCAAAAGACAAGAGAAATTTGGCCAGA AAATGTGGGTTTTGCAAATATTGTTTAAAAACCAAACTTGAAGCCAGGCATGGTGGCCCACACCTGTGGTCCCAG $\verb|CTACTCAGGAGGCTGAGGTGGGAGGATCATTTGAGCCCAGGAGGTCAAGGCTGCAGTGAGCTGTGATGACACCAC| \\$ TGCACTCCAACCTAGGTAACAGAGAGACACCTCTGTCTCTGAAAAAACAAAACTTGAAGTTTGAAACCCCCAGCT TGCTGAGGAGCCCTTTTTATTTTTGGTACTGAGAGTCTCAAGGTCCCATAGCTACATGGTACAGGGCTGTTGTCT GCTTGCTGCACAGCAGAAATTACACCATCCACAGGAAATGGACTATTTTTGCAGTCCAACATCAGCCAACCACAC ${\tt ACAGCCGTGTTTGGAAGCTGAAGAGTAAAGAAATTTCTAGGAATGGCTGTTGTTCTGTTTTTTAGCACAGCCATT}$ TCACATCTGCCCATTCTGTGGTTAGTCAATGGCTTGCAATAAATGTGCAAACTGCATCTATAGGAAACATTTTTG TGATTACGGAATACTTTAGTTGATTGCTGAAAATATTGAAAGGTCTTCATTTTACAGTGATGAGTACATATGCAT GTTTCGGGGACTTGGCCCTTCTGATGAGGGGCCCTCGGTACTCTGGATAACGAAGCTTGTGCAGAGTGGTAACCA TGCTTACACACTAAACTATAATATAAAGGAAATGAAGCCATGTTAATCTGAGAGCAGTGTCGCCATAGTTGTGTT GTTTACAATACTCTATAAATGGGTTCCTGTTGCCCTGTAATTAAACTGCTGCCCGTAGAGGCCTTTCAGTTCCTT TTCTGTCCTTCCCCTTCTTAACACAAGCTCAAATTTTCTAACTTGTTTTTATTTTGAAGACTTTTAAAATGGACA TTTTCAATACATAAAAATAAACAGTGCTTTATAAAAA

MNPEEQIVTWLISLGVLESPKKTICDPEEFLKSSLKNGVVLCKLINRLMPGSVEKFCLDPQTEADCINNINDFLK
GCATLQVEIFDPDDLYSGVNFSKVLSTLLAVNKATEDQLSERPCGRSSSLSAANTSQTNPQGAVSSTVSGLQRQS
KTVEMTENGSHQLIVKARFNFKQTNEDELSVCKGDIIYVTRVEEGGWWEGTLNGRTGWFPSNYVREIKSSERPLS
PKAVKGFETAPLTKNYYTVVLQNILDTEKEYAKELQSLLVTYLRPLQSNNNLSTVEVTSLLGNFEEVCTFQQTLC
QALEECSKFPENQHKVGGCLLSLMPHFKSMYLAYCANHPSAVNVLTQHSDELEQFMENQGASSPGILILTTNLSK
PFMRLEKYVTLLQELERHMEDTHPDHQDILKAIVAFKTLMGQCQDLRKRKQLELQILSEPIQAWEGEDIKNLGNV
IFMSQVMVQYGACEEKEERYLMLFSNVLIMLSASPRMSGFIYQGKIPIAGTVVTRLDEIEGNDCTFEITGNTVER
IVVHCNNNQDFQEWLEQLNRLIRGPASCSSLSKTSSSSCSAHSSFSSTGQPRGPLEPPQIIKPWSLSCLRPAPPL
RPSAALGYKERMSYILKESSKSPKTMKKFLHKRKTERKPSEEEYVIRKSTAALEEDAQILKVIEAYCTSANFQQG
HGSSTRKDSIPQVLLPEEEKLIIEETRSNGQTIMEEKSLVDTVYALKDEVRELKQENKRMKQCLEEELKSRRDLE
KLVRRLLKQTDECIRGESSSKTSILP

FIGURE 6297

AAAAAAACATGGTTGAAGCAGATCGCCCAGGAAAGCTCTTCATTGGTGGGCTTAATACGGAAACAAATGAGAAA GCTCTTGAAGCAGTATTTGGCAAATATGGACGAATAGTGGAAGTACTCTTGATGAAAGACCGTGAAACCAACAAA TCAAGAGGATTTGCTTTTGTCACCTTTGAAAGCCCAGCAGACGCTAAGGATGCAGCCAGAGACATGAATGGAAAG TCATTAGATGGAAAAGCCATCAAGGTGGAACAAGCCACCAAACCATCATTTGAAAGTGGTAGACGTGGACCGCCT CCACCTCCAAGAAGTAGAGGCCCTCCAAGAGGTCTTAGAGGTGGAAGAGGAGGAGGAGGAGGAACCAGGGGACCT $\tt CCCTCACGGGGAGACACATGGATGACGGTGGATATTCCATGAATTTTAACATGAGTTCTTCCAGGGGACCACTC$ CCAGTAAAAAGAGGACCACCACCAAGAAGTGGGGGTCCTCCTCCTAAGAGATCTGCACCTTCAGGACCAGTTCGC AGTAGCAGTGGAATGGGAGGAAGAGCTCCTGTATCACGTGGAAGAGATAGTTATGGAGGTCCACCTCGAAGGGAA CCGCTGCCCTCTCGTAGAGATGTTTATTTGTCCCCAAGAGATGATGGGTATTCTACTAAAGACAGCTATTCAAGC AGAGATTACCCAAGTTCTCGTGATACTAGAGATTATGCACCACCACCACGAGATTATACTTACCGTGATTATGGT CATTCCAGTTCACGTGATGACTATCCATCAAGAGGATATAGCGATAGAGATATGGTCGTGATCGTGACTAT TCAGATCATCCAAGTGGAGGTTCCTACAGAGATTCATATGAGAGTTATGGTAACTCACGTAGTGCTCCACCTACA CGAGGGCCCCGCCATCTTATGGTGGAAGCAGTCGCTATGATGATTACAGCAGCTCACGTGACGGATATGGTGGA GGGCTTCCCCCTTCTATGGAAAGGGGGTACCCTCCTCCACGTGATTCCTACAGCAGTTCAAGCCGCGGAGCACCA ${\tt AGAGGTGGTGGCCGTGGAGGAAGCCGATCTGATAGAGGGGGGAGGCAGAAGCAGATACTAGAAACAAAACATAGAAACTT}$ TGGACCAAAATCCCAGTTCAAAGAAACAAAAAGTGGAAACTATTCTATCATAACTACCCAAGGACTACTAAAAGG AAAAATTGTGTTACTTTTTTAAATTCCCTGTTAAGTTCCCCTCCATAATTTTTATGTTCTTGTGAGGAAAAAAG TAAAACATGTTTAATTTTATTTGACTTTCGCATTGCTTTTCAACAAGCAAATGTTAAATGTGTTAAGACTTGTAC TAGTGTTGTAACTTTCCAAGTAAAAGTATCCCCTAAAGGCCACTTCCTATCTGATTTTTCCCAGCAAATGAGGCA GCTAGCTATTAGAGGGTGGTTGGGGTATGCTACTCATAAGATTTCAGGGTGTCTTCCAACTGAAATCTCAATGTT CTCAGTACGAAAAACCTGAAATCACATGCCTATGTAAGGAAAGTGCTATTCACCCAGTAAACCCAAAAAAAGCAAA TGGATAATGCTGGCCATTTTGCCTTTCTGACATTTCCTTGGGAATCTGCAAGAACCTCCCCTTTCCCTTCCCCCA

MVEADRPGKLFIGGLNTETNEKALEAVFGKYGRIVEVLLMKDRETNKSRGFAFVTFESPADAKDAARDMNGKSLD GKAIKVEQATKPSFESGRRGPPPPRSRGPPRGLRGGRGGSGGTRGPPSRGGHMDDGGYSMNFNMSSSRGPLPVK RGPPPRSGGPPKRSAPSGPVRSSSGMGGRAPVSRGRDSYGGPPRREPLPSRRDVYLSPRDDGYSTKDSYSSRDY PSSRDTRDYAPPPRDYTYRDYGHSSSRDDYPSRGYSDRDGYGRDRDYSDHPSGGSYRDSYESYGNSRSAPPTRGP PPSYGGSSRYDDYSSSRDGYGGSRDSYSSSRSDLYSSGRDRVGRQERGLPPSMERGYPPPRDSYSSSSRGAPRGG GRGGSRSDRGGGRSRY

CTCGTGATTACTCAGTTTGGGAACAGTGACAATAACTTTACAAATACATATACAGATGTATCTTCTGTCCACTCA
GGAAACACAGCAAGGGTCCCATTTAACTACAAGTCAGAGGTGATTCCAGGGCACTTTGGATTCCTCGTGCCCCAG
GATCAAGCAGTACTTACCGCTTCCACGGTACTTAGCGTTCCTGCCAATAAAAGAAGCCCAACTCCGGCCGTCGGC
TGTCGCTGCCAGAGGGAGGAGGGCCATGATCCAAAGGAACCAGAGCAGTTGAGAAAACTGTTTATTGGTGGTCTG
AGCTTTGAAACTACAGAAGATAGTTTAAAAGAACATTTTGAGAAATGGGACACACTCACAGATTGTGTGTAATG
AGAGACCGCCAAACAAAACGTTCCAGGGGCTTAGGTTTTGTGACTTATTCTTGTGTTACAGAGGTAGATGCAGCA
ATGTGTGCTCGACCACACAAGGTTGATGGGCATGTAGTGGGAACCAAAAAGAGCTGTTTCTAGAGAGGATTCTGTA
AAGCCCGGTGCCCATCTAACAGTGAAGAAAATTTTTGTTGGTGGTATTAAAGAAGATACAGAAGAATATAATTTG
AGAGACTACTTTGAAAAGTATGGCAAGATTGAAACCATAGAAGTTATGGAAGACAGGCAGAGTGGAAAAAAAGAGA
GGATTTGCTTTTGTAACTTTTGATGGTCACGATACAGTTGATAAAATTGTTGTCAGAAATACCACACTATTAAT
AGGCATAATTGTGAAGCAAAAAGGCCGTTTCTAAACAAGAAATGCAGTCTGCTGGATCATAGAGAGGTCGTGGAG
GTGGGTCTGGCAATTTTATGGGTTGCGGAGGAAGCTTTGGAGATCAAATTATTGGACCCATGAAA
GGGGGCCAGTTTTGGTGGAAGACACTCGGGCAGTCCCTATGGTGGTGGTGATCAAATTATTGGACCCATGAAA
GGGGGCCAGTTTTGGTGGAAGACACTCGGGCAGTCCCTATGGTGGTGGTTATGGATCTGGTGGTGGAAGAGTGGTGGA
TATGGTAGCAGAAGGTTCTAA

FIGURE 6300

TGGGAATCTGACGGATCGGAGGCATTTGTGAGGAGGCGCGAATCAAGTTAGCGGGGGGAAGAGTCTTAGACCTGG CCAGTCCTCAGGGTGAGGGCCCTGAGGAAGAACTGAGGGACCTCCCACCATAGAGAAGAAACCCCGGCCTGTA CTGCGCTGCCGTGAGACTGGTGCTCCAGGAACCAGGTGGTGACGAACTGGGTGTGAGGCACACAGCCTAAAGTCA GCACAGCAGAGGAGGCCCAGGCAGTGCCAGGAGTCAAGGCCTGTTGGATCTCATCATCCATATCCCTGTTGATAC GTTTACCTGCTGCTCCTGAAGAAGTCGTCATCCCTCCCGTTCCAGGCGTTCCATTCCGCAACGTTGACAACGACT CCCCGACCTCAGTTGAGTTAGAAGACTGGGTAGATGCACAGCATCCCACAGATGAGGAAGAGGAGGAAGCCTCCT CTGAGGAGGAGGAGGTGCCCTCTGGTGTGATACCAAATCTTACCGAGAGCATTCCCAGTAGTCCTCCACAGGGTC CTCCACAGGGTCCTTCCCAGAGTCCTCTGAGCTCCTGCTGCTCCTCTTTTTCATGGAGCTCATTCAGTGAGGAGT CCAGCAGCCAGAAAGGGGAGGATACAGGCACCTGTCAGGGCCTGCCAGACAGTGAGTCCTCTTTCACATATACAC TAGATGAAAAGGTGGCCGAGTTAGTGGAGTTCCTGCTCCTCAAATACGAAGCAGAGGAGCCTGTAACAGAGGCAG AGATGCTGATGATTGTCATCAAGTACAAAGATTACTTTCCTGTGATACTCAAGAGAGCCCGTGAGTTCATGGAGC TTCTTTTTGGCCTTGCCCTGATAGAAGTGGGCCCTGACCACTTCTGTGTGTTTTGCAAACACAGTAGGCCTCACCG ATGAGGGTAGTGATGAGGGCATGCCCGAGAACAGCCTCCTGATTATTATTCTGAGTGTGATCTTCATAAAGG GCAACTGTGCCTCTGAGGAGGTCATCTGGGAAGTGCTGAATGCAGTAGGGGTATATGCTGGGAGGAGCACTTCG TCTATGGGGAGCCTAGGGAGCTCCTCACTAAAGTTTGGGTGCAGGGACATTACCTGGAGTATCGGGAGGTGCCCC ACAGTTCTCCTCCATATTATGAATTCCTGTGGGGTCCAAGAGCCCATTCAGAAAGCATCAAGAAGAAAGTACTAG AGTTTTTAGCCAAGCTGAACAACACTGTTCCTAGTTCCTTTCCATCCTGGTACAAGGATGCTTTGAAAGATGTGG AAGAGAGGTCCAGGCCACAATTGATACCGCAGATGATGCCACTGTCATGGCCAGTGAAAGCCTCAGTGTCATGT $\tt CCAGCAACGTCTCCTTTTCTGAG\underline{\textbf{TGA}} \textbf{AGTCTAGGATAGTTTCTTCCCCTTGTGTTTGAACAGGGCAGTTTAGGTT$ CTAGGTAGTGGAGGCCCAGGTGGGGCTCGAGGAACGTAGTGTTCTTTGCATTTCTGTCCCATATGGGTGATGTAG AGATTTACCTGTTTTCAGTATTTCTAAATGCTTTTCCTTTGAATAGCAGGTAGTTAGCTTCAGAGTGTTAATT ACAATGTGCAATAACTCAGCAGTTAAATAGTGGAACAAAATTGAAGGGTGGTCAGTAGTTTCATTTCCTTGTCCT GCTTATTCTTTGTTCTTGAAAATTATATATACCTGGCTTTGCTTAGCTTGTTGAAGAAAGTAGCAGAAATTAAA TCTTAATAAAGAAAAAAAAAAAAAAAAAAAAAGG

MPPVPGVPFRNVDNDSPTSVELEDWVDAQHPTDEEEEEASSASSTLYLVFSPSSFSTSSSLILGGPEEEEVPSGV
IPNLTESIPSSPPQGPPQGPSQSPLSSCCSSFSWSSFSEESSSQKGEDTGTCQGLPDSESSFTYTLDEKVAELVE
FLLLKYEAEEPVTEAEMLMIVIKYKDYFPVILKRAREFMELLFGLALIEVGPDHFCVFANTVGLTDEGSDDEGMP
ENSLLIILSVIFIKGNCASEEVIWEVLNAVGVYAGREHFVYGEPRELLTKVWVQGHYLEYREVPHSSPPYYEFL
WGPRAHSESIKKKVLEFLAKLNNTVPSSFPSWYKDALKDVEERVQATIDTADDATVMASESLSVMSSNVSFSE

TTTTCTTTGCTGTTCTTCATCCTCGTTGTTGCTGTCATCATGTTCACTGTGGCTTTTACAATACAGCCTGTAAAT TCCTTATGACATAGTTCAGTGCATTTGGCTTTATTGCCTGCTCCACAGTTCTTTACCTTTACTTGGCTTAGAGAA ACTGTATCTTTGTTGCTTCATATAACCTTTCCCCAACCCCACTAAGCTGGACATAACTTATTAGTGGTCCTCCCG TCACTTTATTTGTAGAAATCTCTCTTTCACATGAGCAGGGGTTCTTTCATGTGGTTTAGCTGACAGCAGAACTAG TGATTCTAGACATTTTGCATGGCCCTCATTCAGTGGCTCACAAACATGAGGGAGCATCAGAACTACTTGAGGGGC TTGTTAAAACCCAGTGCGTTAGAAGTCGGATGCGGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCCAGG CAGGCGGATCACTTGAGGTTAGGAGTTCAAGACCAGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAATA CAAAAGTTAGCCGGGTGTGGTGGTGCATGCCTGTAATCCCAGCTTCTTGGGAGGCCAAGGCACAAGAATCGCTTG AACCAGGAGACGGAGGTTTCAGTGAATGAAGATCGTGCCATTGTATTCCAGCCTCGGCAACACAGCAGGACTGTG ATTTTCTTTGGAGACTCCTAGATTTTCTGTGGTTTTGAACTGAATTTGTTGGATGTTGGCAAGTGCCTCTTATGA GCTGTTTCTTTATCCTGCATTTGCCCCACAAAGACTTATCTGGAGGTGAGCAAAGTATGTTTGGTAGTGAGGTCA TACCCACCCTCCTCTTTCCTCCCCTGTCCCTAAAATAATCCACGTGTCTTCCTAAAATCTCTCTTTGATCCTGT CCACAATGCCCCTTTCCTTGGCTGACCAGTATGACTACTGGTCCCCACCTTTCCCTTGCCTATCCCTACCTCCCT TCGCTTTACTTTAAAAAGGTATTTTTTCCTAATTATAAAACTGATGTGTCAGTTACGGAAAAATTAGAAATGCA GCACAAATACATGAATATTTTACCACAAAATTGCCATATAATATCTTGTCTTTTTTGGGGGGTGTGAATTTTTTGC ATTGTTCTGGTCATATTCTTTATCATGTAATTTATGTTCTTTTTTTACTAAGTATTATGTGTGGGTTATTATAGATT $\tt TTCACAAAGATATATTGCTGGTAATATTTTATTGTGTAGTCTTA\underline{TAA} \tt TTTACTTAACCTTCTTTCAATTGTTA$ GAAATTTAGGCTATTTCCAGATTTTCAGTATTGTAAATAATGCTGTGATGACCAATTTTGTGAATAAAATGTTTT TATGTATTTCAGATTATTCCCTTAGGATAGTCTCTCAGTGCCAAGTTGTCAAAAACATCTCTATTTTGCTTATCT TCCTGCTCTTGCTGCCTTAGGGGGTAGTAAACTGAAACATAAAGTAAACATGCATACAAATAAAAAAACATAAA ACAAAAATAAGCAACCTGATGGTAATAGGTGAAAGTGGTAACCTGTTTTAACTTTGAATTCTTGCCGGGCGCGGT GCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACGAGGTCAGGAGTTCAAGACCAGCCT GGCCAAGATGGTGAAATCCCGTCTCTACTAAAAATACAAAAATTAGCCGGGCGTGGTGGTGGGCGCCTGTAATCC CAGCTACTTGGGAGGCTGAGGCAGAATTGCTTGAACCCAGGAGGCGGAGGTTGCAGTGAGCCAAGATCGTGCC ATTCTTTGCTTGTTAGTGACCTTGATCATGGTTCTCTTTGTACGATAGTTGGGCATCTGTATTTCCACTTGTGTG AATTTGCCTTTAAATTTTGGTTATGGGTTTCACCTTTTAAAATAATCAAACATATTTATCTTTTCCTGTGTGATA CCTTTGC

FIGURE 6303

MNIAKESCVRFTLKRYFFPNYKTDVSVTEKLEMQHKYMNILPQNCHIISCLFWGCEFFALFWSYSLSCNLCSFLL SIMCGYYRFSQRYIAGNIFYCVVL

GGGAGCTGTATGAAAGCGGAAGAGTTATAGACCGCTAACACCTGTCACTGGCCACTGGTTTCCCGGAGTTAGCGG ${\tt CCATCGTCCTGGCTCCGGTGGCCTCGCTGGGTCTCGGGGAAGCAGGACTGTTCATTCCTGTGGCGAAAAGCCG}$ GAGTCGGCCCTAGACACCCACGACTCGCAGGGTCCATGGTTCCGGAGGCCGTGAGACCTGCCGGGGCTGACAGGT GCCAGGGCCCATGCTGCGGGAGCCTGTGTGCTCAGCCTTCTTGCGGACGGTAAAGAAGCTAAGTGGAAGAGTGTT TCCTCCTCTGGCCGTAAAGCAGGTACTCTCTGCAGCACCAGCTGTCCCCGCCCTACTCCGGACCGCCCCAAAGAC TCCATGGGATGGACCTGAGTCAGCCGAATCCCAGCCCCTTCCCTTGGGCCTGCTGTGGTGCTGGACATCAGTGAC AGACGGAAGCAGGAGACCATCAAGGCTACGGGAGGCCCGGGGGCGCTTGCGAAGATGAAGTTTGGCTGCCTCTCCT TCCGGCAGCCTTATGCTGGCTTTGTCTTAAATGGAATCAAGACTGTGGAGACGCGCTGGCGTCCCCTGCTGAGCA GCCAGCGGAACTGTACCATCGCCGTCCACATTGCTCACAGGGACTGGGAAGGCGATGCCTGGCGGGAGCTGCTGG TGGAGAGACTCGGGATGACTCCTGCTCAGATTCAGGCCTTGCTCAGGAAAAGGGGGAAAAGTTTGGTCGAGGAGTGA TAGCGGGACTCGTTGACATTGGGGAAACTTTGCAATGCCCCGAAGACTTAACTCCCGATGAGGTTGTGGAACTAG AAAATCAAGCTGTACTGACCAACCTGAAGCAGAAGTACCTGACTGTGATTTCAAACCCCAGGTGGTTACTGGAGC CCATACCTAGGAAAGGAGGCAAGGATGTATTCCAGGTAGACATCCCAGAGCACCTGATCCCTTTGGGGCATGAAG TGTGACAAGTGTGGGCTCCTGAAAGGAATGTTCCAGAGAAACCAGCTAAATCATGACACCTTCAATTTGCCATCA ${\tt CACAGGCAATGTCTCAAGTACTTTGACCTTAGGGTAGAAGGCAAAGCTGCCAGTAAATGTCTCAGCATTGCTGCT}$ AATTTTGGTCCTGCTAGTTTCTGGATTGTACAAATAAATGTGTTGTAGATGACTGGTTAGTGTTTGAGGCTTTGT TCTATGTTTTCCCCTGATTTGTTCTGGTCAAAACTCATCAAATGTGTAACTAGCATCCAGGCGACAATACAGAAA GTCTGGGACCTGGCACTGAATGTTTGCCTGGTAGTGACTAGCCGTTAATCAACCGACTCATCCAGGATGAAGAGG CATGTGTGTTACCTGCATCACACAGCTACTTCCTATCCTAGCAATACATCCAAAATACAGCTCTAGTAGAGTGAG GTTTCTAGTTGTTATCCATGAGGATGATGGGCATTTCCCCCCAGGTATTGACTGCAGTGG

GGAGCTGCATGAAAGCCGAAGTTATGGACCGCTAGCATCTGTCACTGGCCACCGGTTTCCGGGAGTAAGCGGCAG GCCTCGCTGGGTCGCGAGGAGGGGGGGGGGCTGTACTCTGAGGCCAAAAGCCAGAGTCGGCCCTGAACGCCCACGA TCGGCCCTCTTGCAGACGGTAAAGAAACCAAGTGGAAGAGTGTTTCCTCCTCTGGCCGTAAAGCAGCTGTCCCCG CCCTACTCCGGACCGCCCCAAAGACTCCATGGGATGGACCTGAGTCAGACGGAAGCAGCAGCCATCAAGGCTAC GGGAGGCCCGGGGCGCTTGCGAAGATGAAGTTTGGCTGCCTCTCCTTCCGGCAGCCTTATGCTGGCTTTGTCTTA ATTGCTCACAGGGACTGGGAAGGCGATGCCTGTCGGGAGCTGCTGGTGGAGAGACTCGGGATGACTCCTGCTCAG TTGCAATGCCCCGAAGACTTAACTCCCGATGAGGTTGTGGAACTAGAAAATCAAGCTGCACTGAACCTGAAG CAGAAGTACCTGACTGTGATTTCAAACCCCAGGTGGTTACTGGAGCCCATACCTAGGAAAGGAGGCAAGGATGTA TTCCAGGTAGACATCCCAGAGCACCTGATCCCTTTGGGGCATGAAGTGTGACAAGTGTGGGCTCCTGAAAGGAAT GTTCCAGAGAAACCAGCTAAATCATGGCACCTTCAATTTGCCATCGTGACGCAGACCTGTATAAATTAGGTTAAA GATGAATTTCCTTGTGTGATGCCTCCTTAGGCACACAGGCAATGTCTCAAGTACTTTGACCTTAGGGTAGAAGGC TIGTAGATG

MCVTDKTRPPSSSWFPMPAKYMTFLGPLTSFAVLHLMTFPLYLPCCAGKEAKWKSVSSSGRKAAVPALLRTAPKT PWDGPESAESQPLPLGLLWCWTSVTDGSRRPSRLREARGACEDEVWLPLLPAALCWLCLKWNQDCGDALASPAEQ PAELYHRRPHCSQGLGRRCLAGAAGGETRDDSCSDSGLAQERGKVWSRSDSGTR

GGCACGAGGGCGGGATCAGAGAGAGCGAGGGCCTGGTTCTGAGGGGTCGGCTTGAGATCGGCTGAGGGAAGCG TGAAGAAGACCTGCCTGTGGGTCTCAATTGCCCAGCTCCGGCCCACACTCTCCTGCTGCCCTGACCTGAGTCATC ATCCTTCTTGGGCAGAAGAGTCAGCGCTACAAGGCTGAGGAAGGCCTTCAGGCCCAAGGAGAGGCACCAGGGCTT ${\tt ATGGATGTGCAGATTCCCACAGCTGAGGAGCAGAAGGCTGCATCCTCCTCCTCTACTCTGATCATGGGAACCCTT}$ GAGGAGGTGACTGATTCTGGGTCACCAAGTCCTCCCCAGAGTCCTGAGGGTGCCTCCTCTTCCCTGACTGTCACC GACAGCACTCTGTGGAGCCAATCCGATGAGGGTTCCAGCAGCAATGAAGAGGAGGGGCCAAGCACCTCCCCGGAC AAATATCAAATTAAGGAGCCGGTCACAAAGGCAGAAATGCTTGAGAGTGTCATCAAAAATTACAAGAACCACTTT GGCCACTCCTACATCCTTGTCACCTGCCTGGGCCTCTCCTATGATGGCCTGCTGGGTGATGATCAGAGTACGCCC AAGACCGGCCTCCTGATAATCGTCCTGGGCATGATCTTAATGGAGGGCAGCCGCGCCCCGGAGGAGGCAATCTGG CAAGAGTGGGTGCAGGAGAACTACCTGGAGTACCGCCAGGCGCCCGGCAGTGATCCTGTGCGCTACGAGTTCCTG TGGGGTCCAAGGGCCCTTGCTGAAACCAGCTATGTGAAAGTCCTGGAGCATGTGGTCAGGGTCAATGCAAGAGTT $\tt CGCATTTCCTACCCATCCCTGCATGAAGAGGCTTTGGGAGAGGAGAAAGGAGTT{\color{red}{\bf TGA}}GCAGGAGTTGCAGCTAGG{\color{red}{\bf CAGCATCCCATGCATGAAGAGGAGTTGCAGCTAGG}$ GCCAGTGGGCCAGGTTGTGGGAGGGCCTGGGCCAGTGCACGTTCCAGGGCCACATCCACCACTTTCCCTGCTCTG TTACATGAGGCCCATTCTTCACTCTGTGTTTGAAGAGAGCAGTCACAGTTCTCAGTAGTGGGGAGCATGTTGGGT GTGAGGGAACACAGTGTGGACCATCTCTCAGTTCCTGTTCTATTGGGCGATTTGGAGGTTTATCTTTGTTTCCTT TTGAATTCAGACACTACAAGAGCAGAGGATTAAGGTTTTTTTAGAAATGTGAAACAACATAGCAGTAAAATACAT GAGATAAAGACATAAAGAAATTAAACAATAGTTAATTCTTGCCTTACCTGTACCTCTTAGTGTACCCTATGTACC

MLLGQKSQRYKAEEGLQAQGEAPGLMDVQIPTAEEQKAASSSSTLIMGTLEEVTDSGSPSPPQSPEGASSSLTVT DSTLWSQSDEGSSSNEEEGPSTSPDPAHLESLFREALDEKVAELVRFLLRKYQIKEPVTKAEMLESVIKNYKNHF PDIFSKASECMQVIFGIDVKEVDPAGHSYILVTCLGLSYDGLLGDDQSTPKTGLLIIVLGMILMEGSRAPEEAIW EALSVMGLYDGREHSVYWKLRKLLTQEWVQENYLEYRQAPGSDPVRYEFLWGPRALAETSYVKVLEHVVRVNARV RISYPSLHEEALGEEKGV

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GAGCTCGCGGGCGACTGCCTGCCAGGCAGACGCTGCAGCTAAGCTGCGCGGTGGCTGTGGCAGGTGAGAGCCTCC GGAAGGGAGGCGGCCTCTGGCCCGACCCTGCTCCGCGATCGCCCACTCGGGCGGCCCGGGCCTGGCAGGGA AGGGCCGCCGCCGCCGCGCGTTTGCGAGGCCTGGCGGGGCCCGGGGGCCCAGGAATGGCGTAAGGGGCCCCC TCGCGCCCGAGCTCTGCTAGCCACCCGTCCGACAACTTCCGGACTCCCAGGGACAGCCCTGCCATCAAGGAAGAC AGCACAGGACTGGGACCCACCCATGAACCCTTCTCAGGACAACCCAACAGCACCAGTGGGGATGTTCTCCTAAGC GGGGGCCGCTACTTGAGCATTGGAGATGGCTCTGTGATGGAGTTTGAGTTTCCTGAGGACAGTGAGGGCATCATC GTGATCTCCAGCCAGTACCCAGGCCAGGCCAACAGGACGGCGCCTGGCCCCATGCTCAGGGTCACCTCCCTGGAC ACAGAGGTGCTGACCATCAAGAACGTGAGTGCTATAACCTGGGGAGGCGGGGGTGGCTTTGTGGTGAGCATCCAC TCAGGCCTGGCCTGGCCCCACTCCACATCCAGCTCGTGGACGCCCATGAGGCCCCGCCCACACTGATTGAG GAGCGGAGAGACTTCTGCATCAAGGTCTCACCTGCTGAAGACACGCCTGCCACCCTCAGCGCCGACCTGGCCCAC TTCTCGGAAAACCCAATCCTCTACCTGCTCCTGCCTCTTATCTTTGTCAACAAGTGTTCGTTTGGGTGCAAAGTG GAACTCGAGGTTCTGAAGGGGCTCATGCAGAGCCCCCAGCCCATGCTGCTGGGCCTCCTGGGCCAGTTTCTGGTC ATGCCCTTGTACGCTTTCCTCATGGCCAAGGTCTTCATGCTGCCCAAGGCCCTGGCTCTGGGCCTCATCATCACC TGCTCGTCGCCTGGCGGGGGGGGGGGCTACCTCTTCAGCCTCCTTCTTGGAGGGGACGTCACCCTGGCCATCTCC ATGACTTTCCTCTACGGTGGCTGCCACTGGCTTCTTGCCTCTGTCTTCGGCCATCTACAGCCGCCTGCTCAGC ATCCATGAGACGCTCCACGTGCCCATCTCCAAGATCCTGGGGACCCTGCTGTTCATTGCCATCCCCATAGCCGTG GGCGTGCTGATCAAGTCCAAGCTCCCCAAGTTCTCCCAGCTGCTGCAGGTCGTCAAGCCCTTCAGCTTTGTG CTGGTGGGTATCACGGTGCCCTGGTTGGCCTGTTGGTGGGCTACTGCCTAGCCACGTGTCTGAAGCTGCCAGTG GCCCAGCGGCGGACGGTCAGCATTGAGGTAGGGGTGCAGAACAGCCTGCTGGCCTTGGCCATGCTGCAGCTATCC CTCCGCCGCCTTCAAGCTGACTATGCCTCCCAGGCCCCCTTCATTGTGGCGCTGAGCGGCACCTCCGAGATGCTG ${\tt GCCTTGGTCATTGGCCACTTCATCTACAGCAGCCTGTTCCCAGTTCCC} \underline{{\tt TGA}}{\tt GGCCTCTGGGTCAAGCTTTCATCA}$ GCCCCAGCCCCACACTCCACCAAAGTTCTCATGCACTATGCACTCAGAAAAATCCAGGCTTATTTTTTTACTGA TTCAATAAAAGAGAGAAGCAAGC

MVLMQDKGSSQQWPGLGGEGGGTGPLSMLRAALLLISLPWGAQGTASTSLSTAGGHTVPPTGGRYLSIGDGSVME FEFPEDSEGIIVISSQYPGQANRTAPGPMLRVTSLDTEVLTIKNVSAITWGGGGGFVVSIHSGLAGLAPLHIQLV DAHEAPPTLIEERRDFCIKVSPAEDTPATLSADLAHFSENPILYLLLPLIFVNKCSFGCKVELEVLKGLMQSPQP MLLGLLGQFLVMPLYAFLMAKVFMLPKALALGLIITCSSPGGGGSYLFSLLLGGDVTLAISMTFLSTVAATGFLP LSSAIYSRLLSIHETLHVPISKILGTLLFIAIPIAVGVLIKSKLPKFSQLLLQVVKPFSFVLLLGGLFLAYRMGV FILAGIRLPIVLVGITVPLVGLLVGYCLATCLKLPVAQRRTVSIEVGVQNSLLALAMLQLSLRRLQADYASQAPF IVALSGTSEMLALVIGHFIYSSLFPVP

GAGCAGATGGAGCAGATGAAGCAGCGCATCGCGGAGGAGAACATCATGAAATCCAACATTGACAAGAAGTTCTCT GCGCACTACGACGCGGTGGAGGCAGAGCTCAAGTCCAGCACCGTGGGTCTCGTGACCCTGAATGACATGAAGGCC AAGCAGGAGGCTCTGGTGAAGGAGCGGGAGAAGCAGCTGGCCAAGAAGGAGCAGTCCAAGGAGCTGCAGATGAAG CTGGAGAAGCTTCGAGAGAAGGAGCGTAAGAAGGAAGCCAAGCGGAAGATCTCCAGCCTGTCCTTCACCCTGGAG GAGGAAGAGAGGGGGGGGGGAGGAGAGAGAGGGGGCCCATGTATGAGGAGAGATGGAAAGGGAAGAGATCACC ACGAAGAAGAGAAAACTGGGGAAGAACCCAGACGTTGACACAAGCTTCTTGCCTGATCGAGACCGTGAGGAGGAG GAGAATCGGCTTCGGGAAGAGCTGCGGCAGGAGTGGGAAGCCAAGCAGGAGAAGATCAAGAGTGAGGAGATCGAG ATCACCTTCAGCTACTGGGATGGCTCTGGGCACCGGCGGACAGTCAAGATGAGAAAAGGGCAACACCATGCAGCAG TTCCTGCAGAAGGCGCTCGAGATCCTTCGGAAAGACTTCAGTGAGCTGAGGTCCGCAGGGGTGGAGCAGCTCATG TACATCAAGGAGGACTTGATCATCCCTCACCATCACAGCTTCTACGACTTCATCGTCACCAAGGCACGGGGGAAG AGTGGACCACTCTTCAACTTTGATGTTCATGACGATGTGCGGTTGCTCAGTGACGCCACTGTGGAGAAGGATGAG TCCCATGCAGGCAAGGTGGTGCTGAGGAGCTGGTACGAGAAGAACAAGCACATCTTTCCCGCCAGCCGCTGGGAA CCCTACGACCCTGAAAAGAAGTGGGACAAGTACACGATCCGCTGAGCATCCAGGAGGCTGCGCGGCCCCGGCTCC TCAGCTCCCTCAGTGTGCCCCGTGGTGTCACCGGGACTCCAGGCACCCGCTCCCCTGCGACCATGCCAGGCACGC TGGGAGGAGGACGCCAGCTGCTCGTGTCCTGCCCCTGCCACATCAGTGACTGCTTTATTCTTTTCCAATAAAGAA GTGCACGTGTCAGAGCTGGAGCGCCTGCATTGTGAG

MAQYKGAASEAGRAMHLMKKREKQREQMEQMKQRIAEENIMKSNIDKKFSAHYDAVEAELKSSTVGLVTLNDMKA KQEALVKEREKQLAKKEQSKELQMKLEKLREKERKKEAKRKISSLSFTLEEEEEGGEEEEEAAMYEEEMEREEIT TKKRKLGKNPDVDTSFLPDRDREEEENRLREELRQEWEAKQEKIKSEEIEITFSYWDGSGHRRTVKMRKGNTMQQ FLQKALEILRKDFSELRSAGVEQLMYIKEDLIIPHHHSFYDFIVTKARGKSGPLFNFDVHDDVRLLSDATVEKDE SHAGKVVLRSWYEKNKHIFPASRWEPYDPEKKWDKYTIR

CTTGAACGCCTGACCTCGTATCCACCCGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCACGCC CAGCCCATAATTTATTGATTTTTTAAAATTTGTCCAGCCTTCTATTACCACGTCGAATCCATTAGCTACAGCCAT ${\tt CCCATGAGAAGCTGAGTGGATTCAGCCCCACCTCCTGCTCACAGACCCTGTCCGAGCACCTCATTTGTCCCAACA}$ ${\tt GCATTACTGCAGGACCCCCAGGACGTTGGACTGCCAGCTCCCTGGGTCTCCTCTCTGGGGCAGATCCTCAGT}$ ${\tt CCTCCCTTGACTTCACGACTGTGGCCAGATCATGTGTGGACTGTCCCTCTCTTTGGGTCTCCAGAGCGCTTGCAT}$ CAAACACCCCTAACTCAGAAGTGTGCAGCCACACTGGGACTCAGAACCCAACAACAGGGACAGAAGACTCACGCC CTTGGGGTGCCCGGTCTCGTGGCATCAGGCATGACTTCCAGCTCCTGCGCCTTCCCCAGCAACTGCTGACTGGGG CCCAGGCTTGAGTGACTCACAGCCCTATTCAGGCAGGAGCTGCTCTTCTGGGGTATCGCGATCCACTTAAGGATG AGGCAGACTTGGTGACAAGCTGGTCTGAGCAGCGCCTCCAGAGCCAGAACTGAGCCCAGTGAGAGCGCACCCTGG TCCTGGCCAATGGGGCCCAGGCCTTTCGCATCTGCGCCTTCAATGCCCAGCGGCTGACACTGGCCAAGGTGGCCA GGGAGCAGGTGATGGACACCTTAGTTCGGATACTGGCTCGCTGTGACATCATGGTGCTGCAGGAGGTGGTGGACT CTTCCGGCAGCGCCATCCCGCTCCTGCTTCGAGAACTCAATCGATTTGATGGCTCTGGGCCCTACAGCACCCTGA GCAGCCCCAGCTGGGGCGCACCTACATGGAGACGTATGTGTACTTCTATCGGTCACACAAAACACAGGTCC TGAGTTCCTACGTGTACAACGATGAGGATGACGTCTTTGCCCGGGAGCCATTTGTGGCCCAGTTCTCTTTGCCCA GCAATGTCCTTCCCAGCCTGGTGTTGGTCCCGCTGCACACCACTCCTAAGGCCGTAGAGAAGGAGCTGAACGCCC TCTACGATGTGTTTCTGGAGGTCTCCCAGCACTGGCAGAGCAAGGACGTGATCCTGCTTGGGGACTTCAATGCTG ACTGCGCTTCACTGACCAAAAAGCGCCTGGACAAGCTGGAGCTGCGGACTGAGCCAGGCTTCCACTGGGTGATTG $\tt CCGATGGGGAGGACCACAGTGCGGGCCAGCACCCACTGCACCTATGCCCGCGTCGTGCTGCACGGGGAGCGCT$ GCCGGAGTCTGCTGCACACTGCGGCTGCCTTTGACTTCCCCACGAGCTTCCAGCTCACCGAGGAGGAGGACCCTCA CTGTTCTGTTGCTGCTATCACTCCTGTCCCCTCAGCTGTGCCCTGCTGCCTGAGCGTCCCCCTACCCCCCAGGG GATTAGGAGAGGAAGCCAGGGGCCCTGCACTCATGCCACCTGCCAGGTAGTGTAGTATCAGGAGTGGAGACAAAG TGGGCTCTGGGTTGGGGTAGGGGAGGGAGGGTTCAGAAAGAGGAATGAAGATGTTGTATGACAAGAAGGAAAGT TACTGAGAACAAAAACCCAGATTGGTGAGATAGGACACTTGTGCAGCAGATATGCCAATGGGCCATGTTTATTGT GGATTGGTAAGAATCACCAGGAAACCATTAAGCCCCAATAGCTACAAGGAGGGTGGTTAATCTGCTATATCAAAC TCCTTCCCTGAAACCAGCAAACACCGGGAAACATTTTGGCTCATTATAATCCGGTGAACAATGCAGTCAGGCCTG TTATAACCGCTGAGCAGCCACACTCGCACCTCCTGGGTGCTGTAGTCTGGTACAGGCTTCTGCATGCCTG GTAAAGGTCCAGCCAAGGCTGGTCAAGGCAACATCTCCACACAGAAAATCTGCACCAGTTATGTAAGCTAAAAAG AATAAAATAAAGGTAATTAAAAACCT

 $\tt CTCTTTCCCTTCGGTGTGCCACTGAAGATCCTGGTGTCGCC\underline{ATG} GGCCGCCGCCCGCCCGTTGTTACCGGTATT$ GTAAGAACAAGCCGTACCCAAAGTCTCGCCTTCTGCCGAGGTGTCCCTGATGCCAAGATTCGCATTTTTGACCTGG GGCGGAAAAAGGCAAAAGTGGATGAGTTTCCGCTTTGTGGCCACATGGTGTCAGATGAATATGAGCAGCTGTCCT $\tt CTGAAGCCCTGGAGGCTGCCCGAATTTGTGCCAATAAGTACATGGTAAAAAGTTGTGGCAAAGATGGCTTCCATA$ TCCGGGTGCGGCTCCACCCCTTCCACGTCATCCGCATCAACAAGATGTTGTCCTGTGCTGGGGCTGACAGGCTCC ${\tt AAACAGGCATGCGAGGTGCCTTTGGAAAGCCCCAGGGCACTGTGGCCAGGGTTCACATTGGCCAAGTTATCATGT}$ ${\tt CCATCCGCACCAAGCTGCAGAACAAGGAGCATGTGATTGAGGCCCTGCGCAGGGCCAAGTTCAAGTTTCCTGGCC}$ GCCAGAAGATCCACATCTCAAAGAAGTGGGGCTTCACCAAGTTCAATGCTGATGAATTTGAAGACATGGTGGCTG AAAAGCGGCTCATCCCAGATGGCTGTGGGGTCAAGTACATCCCCAGTCGTGGCCCTCTGGACAAGTGGCGGGCCC ${\tt TGCACTCA} \underline{{\tt TGA}} {\tt GGGCTTCCAATGTGCTGCCCCCCTCTTAATACTCACCAATAAATTCTACTTCCTGTCCACCTAT}$ GTCTTTGTATCTACATTCTTGACGGGGAAGGAACTTCCTCTGGGAACCTTTGGGTCATTGCCCTTTCACATCAGA AACAGGTTGACAACTCAGCCCTGCTCATGAGGCAGCAAACCCTGCAAAGGGCTGGGACTGGTGGCCTTATGTCAG TTGTCTACTCTGGAGCTTGACTTGGACCTCCCCAGGTCCTAGGCAGTAGGTTGAAAAACACTGAAGTGCTTTTCA TGAAGCACAGCTGCAGCAAAGCCTTGCAATCCCAGGCTGGGGTCAGCCTACAGTTGTTGTTTTTACAACACA TGGGCTTGTTCTCACCCATCTGGTTTGGCCATTCCTCCTTGGTGGGAATCATCCAGGTACTGCTGAGGTCACCTG $\tt CGATTTGCCCCATTTCCTATCTCTAGCAACCTCCTGGGCCCCATGCCCCACCCCTTCTAGAACCTGCATTCCCA$ GGGCCTTCACCACCTGACCAAAGGTCTAGGCTAACCTTTGGTCATTTGTAACAAGACCTCGGAACAGACACGTGT GTGGCATGGTTTGGCCTGGGGATCTTAGATGTCTGACCTGAACTATTGTAGAACAGCGCTGGCTTTTGGGGGGAGC AGCAAAAATGAGAGGAGTGCTAGGTGGGTGGCCTGAGCATCTGTATCCAGGGACAGGACTCCAAAGGCTTTTGGT TTTACAGCCATTTCTTAGGTTTTTAATTACCTTTATTTTATTTTTGCCAAACATACCTGGGAATACCTTTTATTTT TTTTTTACCTTGGGGTGATGGTTCCAAACCATAAATGTGATTATAGTTAACACATGACCCTTCTAGCGTCCCAGC TGTGTCCTGCAGCCCCTTTCCGGGACACCTGGGTTCACACAGCTTTTTAGCTTACATAACTGGTGCAGATTTTCT AGCACCCAGGAGGTGCGAGTGTGGCTGCTCAGCGGTTATAACAGGCCTGACTGCATTGTTCACCGGATTATAATG AGCCAAAATGTTTCCCGGTGTTTGCTGGTTTCAGGGAAGGAGTTTGATATAGCAGATTAACCACCCTCCTTGTAG CTATTGGGGCTTAATGGTTTCCTGGTGATTCTTACCAATCCACAATAAACATGGCCCATTGGCATATCTGCAAAA ААААААААААА

 ${\tt MGRRPARCYRYCKNKPYPKSRFCRGVPDAKIRIFDLGRKKAKVDEFPLCGHMVSDEYEQLSSEALEAARICANKY}\\ {\tt MVKSCGKDGFHIRVRLHPFHVIRINKMLSCAGADRLQTGMRGAFGKPQGTVARVHIGQVIMSIRTKLQNKEHVIE}\\ {\tt ALRRAKFKFPGRQKIHISKKWGFTKFNADEFEDMVAEKRLIPDGCGVKYIPSRGPLDKWRALHS}\\$

CGGCCGGTTTTGGTAGGCCCGGGCCGCCAGGCCTCCGCCTGAGCCCGCACCCGCCATGGACAACTACGCAGA TCTTTCGGATACCGAGCTGACCACCTTGCTGCGCCGGTACAACATCCCGCACGGGCCTGTAGTAGGATCAACTCG TAGGCTTTACGAGAAGAAGATCTTCGAGTACGAGACCCAGAGGCGGCGCTCTCGCCCCCAGCTCGTCCGCCGC CGCTTTACTCTACCAGAGCAAGGGCTACAATGACGACTACTATGAAGAGAGCTACTTCACCACCAGGACTTATGG TCACCAGGTGCATGATGACGATCTTTTGTCTTCTTCTGAAGAGGAGTGCAAGGATAGGGAACGCCCCATGTACGG CCGGGACAGTGCCTACCAGAGCATCACGCACTACCGCCCTGTTTCAGCCTCCAGGAGCTCCCTGGACCTGTCCTA TTATCCTACTTCCTCCTCCACCTCTTTTATGTCCTCCTCATCATCTTCCTCTTCATGGCTCACCCGCCGTGCCAT $\verb|CCGGCCTGAAAACCGTGCTCCTGGGGCTGGGCCAGGATCGCCAGGTCCCGCTCTGGGGCCAGCTGCTGCT|\\$ TTTCCTGGTCTTTGTGATCGTCCTCTTCTTCATTTACCACTTCATGCAGGCTGAAGAAGGCAACCCCTTCTAGAG ${\tt GGAGCCATGAGGGTCTGGGCTTCAGAGCTAGGTCTTTGGGGAAGTCCTGGCTGACTGCCTTAGCAGTGGGGGTGG}$ ATTCCTCCTTTTGTCATCTTGTGGGGGGGGGGGTTAACCAAAGGCCACCCTGACTTTGTTTTTGTGGACACAC AATAAAAGCCCCGTTTATTTGT

6847/6881 FIGURE 6329A

GCGATCCGGGCGCCACCCCGCGGTCATCGGTCACCGGTCGCTCTCAGGAACAGCAGCGCAACCTCTGCTCCCTGC CGGCGGCGTCGACACGCGGGACGCCGAGATGCCGGCCACCGAGAAGGACCTGGCGGAGGACGCGCCGTGGAAGAA GATCCAGCAGAACACTTTCACGCGCTGGTGCAACGAGCACCTGAAGTGCGTGAGCAAGCGCATCGCCAACCTGCA GACGGACCTGAGCGACGGGCTGCGGCTTATCGCGCTGTTGGAGGTGCTCAGCCAGAAGAAGATGCACCGCAAGCA CAACCAGCGGCCCACTTTCCGCCAAATGCAGCTTGAGAACGTGTCGGTGGCGCTCGAGTTCCTGGACCGCGAGAG CCTGATCCTGCACTACTCCATCTCCATGCCCATGTGGGACGAGGAGGAGGAGGAGGAGGAGGAGCAGACCCC GAGCGGCCGGGCCCTGGCGGCCCTGGTGGACAGCTGTGCCCCGGGCCTGTGTCCTGACTGGGACTCTTGGGACGC GCTGAAGCCAGGGGCTCCCTTGCGGCCCAAACTGAACCCGAAGAAAGCCCGTGCCTACGGGCCAGGCATCGAGCC CACAGGCAACATGGTGAAGAAGCGGGCAGAGTTCACTGTGGAGACCAGAAGTGCTGGCCAGGGAGAGGTGCTGGT GTACGTGGAGGACCCGGCCGGACACCAGGAGGAGGCAAAAGTGACCGCCAATAACGACAAGAACCGCACCTTCTC CGTCTGGTACGTCCCCGAGGTGACGGGGACTCATAAGGTTACTGTGCTCTTTGCTGGCCAGCACATCGCCAAGAG ${\tt CAGTGGCAACATCGCCAACAAGACCACCTACTTTGAGATCTTTACGGCAGGAGCTGGCACGGGCGAGGTGAGGTCGAGGTGAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGAGGAGGTCAG$ TGTGATCCAGGACCCCATGGGACAGAAGGGCACGGTAGAGCCTCAGCTGGAGGCCCGGGGCGACAGCACATACCG CTGCAGCTACCAGCCCACCATGGAGGGCGTCCACACCGTGCACGTCACGTTTGCCGGCGTGCCCATCCCTCGCAG GGGTGTGCGGGTGAAGGAGACAGCTGACTTCAAGGTGTACACAAAGGGCGCTGGCAGTGGGGAGCTGAAGGTCAC CGTGAAGGGCCCCAAGGGAGGAGCGCGTGAAGCAGAAGGACCTGGGGGATGGCGTGTATGGCTTCGAGTATTA $\tt CCCCATGGTCCCTGGAACCTATATCGTCACCATCACGTGGGGTGGTCAGAACATCGGGCGCAGTCCCTTCGAAGT$ GAAGGTGGGCACCGAGTGTGGCAATCAGAAGGTACGGGCCTGGGGCCCTGGGCTGGAGGGCGGCGTCGTTGGCAA GTCAGCAGACTTTGTGGTGGAGGCTATCGGGGACGACGTGGGCACGCTGGGCTTCTCGGTGGAAGGGCCATCGCA GGCTAAGATCGAATGTGACGACAAGGGCGACGGCTCCTGTGATGTGCGCTACTGGCCGCAGGAGGCTGGCGAGTA TGCCGTTCACGTGCTGTGCAACAGCGAAGACATCCGCCTCAGCCCCTTCATGGCTGACATCCGTGACGCGCCCCA GGACTTCCACCCAGACAGGGTGAAGGCACGTGGGCCTGGATTGGAGAAGACAGGTGTGGCCGTCAACAAGCCAGC TGTGGAGGCGTTGGTCAAGGACAACGGCAATGGCACTTACAGCTGCTCCTACGTGCCCAGGAAGCCGGTGAAGCA CACAGCCATGGTGTCCTGGGGAGGCGTCAGCATCCCCAACAGCCCCTTCAGGGTGAATGTGGGAGCTGGCAGCCA CCCCAACAAGGTCAAAGTATACGGCCCCGGAGTAGCCAAGACAGGGCTCAAGGCCCACGAGCCCACCTACTTCAC TGTGGACTGCGCCGAGGCTGGCCAGGGGGACGTCAGCATCGGCATCAAGTGTGCCCCTGGAGTGGTAGGCCCCGC CGAAGCTGACATCGACTCCGCAATCACCAATGACACCTTCACGGTCAAGTACACGCCCCGGGGGGC TGGCAGCTACACCATTATGGTCCTCTTTGCTGACCAGGCCACCACCCAGCCCCATCCGAGTCAAGGTGGAGCC CCACTTCACAGTAAATGCCAAAGCTGCTGGCAAAGGCAAGCTGGACGTCCAGTTCTCAGGACTCACCAAGGGGGA TGCAGTGCGAGATGTGGACATCATCGACCACCATGACAACACCTACACAGTCAAGTACACGCCTGTCCAGCAGGG TCCAGTAGGCGTCAATGTCACTTATGGAGGGGATCCCATCCCTAAGAGCCCTTTCTCAGTGGCAGTATCTCCAAG CCTGGACCTCAGCAAGATCAAGGTGTCTGGCCTGGGAGAAGAGGTGGACGTTGGCAAAGACCAGGAGTTCACAGT CAAATCAAAGGGTGCTGGTGGTCAAGGCAAAGTGGCATCCAAGATTGTGGGCCCCTCGGGTGCAGCGGTGCCCTG CAAGGTGGAGCCAGGCCTGGGGGCTGACAACAGTGTGGTGCGCTTCCTGCCCCGTGAGGAAGGGCCCTATGAGGT GGAGGTGACCTATGACGGCGTGCCCGTGCCTGGCAGCCCCTTTCCTCTGGAAGCTGTGGCCCCCACCAAGCCTAG GGGCGCCGGCACAGGTGGCCTGGGCCTGACGGTGGAGGGCCCCTGTGAGGCGCAGCTCGAGTGCTTGGACAATGG GGATGGCACATGTTCCGTGTCCTACGTGCCCACCGAGCCCGGGGACTACAACATCAACATCCTCTTCGCTGACAC

6848/6881 FIGURE 6329B

CCACATCCCTGGCTCCCCATTCAAGGCCCACGTGGTTCCCTGCTTTGACGCATCCAAAGTCAAGTGCTCAGGCCC CGGGCTGGAGCGGGCCACCGCTGGGGAGGTGGGCCAATTCCAAGTGGACTGCTCGAGCGCGGGCAGCGGGAGCT CATTACCTACATTCCCCTCTGCCCCGGGGCCTACACCGTCACCATCAAGTACGGCGGCCCAGCCCGTGCCCAACTT CCCCAGCAAGCTGCAGGTGGAACCTGCGGTGGACACTTCCGGTGTCCAGTGCTATGGGCCTGGTATTGAGGGCCA GGGTGTCTTCCGTGAGGCCACCACTGAGTTCAGTGTGGACGCCCGGGCTCTGACACAGACCGGAGGGCCGCACGT CAAGGCCCGTGTGGCCAACCCTCAGGCAACCTGACGGAGACCTACGTTCAGGACCGTGGCGATGGCATGTACAA AGTGGAGTACACGCCTTACGAGGAGGGACTGCACTCCGTGGACGTGACCTATGACGGCAGTCCCGTGCCCAGCAG CCCCTTCCAGGTGCCCGTGACCGAGGCTGCGACCCCTCCCGGGTGCGTGTCCACGGGCCAGGCATCCAAAGTGG GGGCCCCTCCGAGGĈCAAGATGTCCTGCATGGATAACAAGGACGGCAGCTGCTCGGTCGAGTACATCCCTTATGA GGCTGGCACCTACAGCCTCAACGTCACCTATGGTGGCCATCAAGTGCCAGGCAGTCCTTTCAAGGTCCCTGTGCA TGATGTGACAGATGCGTCCAAGGTCAAGTGCTCTGGGCCCGGCCTGAGCCCAGGCATGGTTCGTGCCAACCTCCC TCAGTCCTTCCAGGTGGACACAAGCAAGGCTGGTGTGGCCCCATTGCAGGTCAAAGTGCAAGGGCCCAAAGGCCT GGTGGAGCCAGTGGACGTAGACAACGCTGATGGCACCCAGACCGTCAATTATGTGCCCAGCCGAGAAGGGCC CTACAGCATCTCAGTACTGTATGGAGATGAAGAGGTACCCCGGAGCCCCTTCAAGGTCAAGGTGCTGCCTACTCA GACACACATCCAAGACAACCATGACGGCACGTATACAGTGGCCTACGTGCCAGACGTGACAGGTCGCTACACCAT CAAGTGCACTGTCACAGGTGCTGGCATCGGCCCCACCATTCAGATTGGGGAGGAGACGGTGATCACTGTGGACAC TAAGGCGGCAGGCAAAGGCAAAGTGACGTGCACCGTGTGCACGCCTGATGGCTCAGAGGTGGATGTGGACGTGGT GGAGAATGAGGACGGCACTTTCGACATCTTCTACACGGCCCCCAGCCGGGCAAATACGTCATCTGTGTGCGCTT TCTACGGTCTCAGCAGCTGGCCCCACAGTACACCTACGCCCAGGGCGGCCAGCAGACTTGGGCCCCGGAGAGGCCC ${\tt CCTGGTGGGTGTCAATGGGCTGGATGTGACCAGCCTGAGGCCCTTTGACCTTGTCATCCCCTTCACCATCAAGAA}$ GGGCGAGATCACAGGGGAGGTTCGGATGCCCTCAGGCAAGGTGGCGCAGCCCACCATCACTGACAACAAAGACGG CACCGTGACCGTGCGGTATGCACCCAGCGAGGCTGGCCTGCACGAGATGGACATCCGCTATGACAACATGCACAT CCCAGGAAGCCCCTTGCAGTTCTATGTGGATTACGTCAACTGTGGCCATGTCACTGCCTATGGGCCTGGCCTCAC CCATGGAGTAGTGAACAAGCCTGCCACCTTCACCGTCAACACCAAGGATGCAGGAGAGGGGGGCCTGTCTCTGGC CATTGAGGGCCCGTCCAAAGCAGAAATCAGCTGCACTGACAACCAGGATGGGACATGCAGCGTGTCCTACCTGCC TGTGCTGCCGGGGGACTACAGCATTCTAGTCAAGTACAATGAACAGCACGTCCCAGGCAGCCCCTTCACTGCTCG GGTCACAGGTGACGACTCCATGCGTATGTCCCACCTAAAGGTCGGCTCTGCTGCCGACATCCCCATCAACATCTC AGAGACGGATCTCAGCCTGCTGACGGCCACTGTGGTCCCGCCCTCGGGCCGGGAGGAGCCCTGTTTGCTGAAGCG GCTGCGTAATGGCCACGTGGGGATTTCATTCGTGCCCAAGGAGACGGGGGAGCACCTGGTGCATGTGAAGAAAA TGGCCAGCACGTGGCCAGCCCCATCCCGGTGGTGATCAGCCAGTCGGAAATTGGGGATGCCAGTCGTGTTCG GGTCTCTGGTCAGGGCCTTCACGAAGGCCACACCTTTGAGCCTGCAGAGTTTATCATTGATACCCGCGATGCAGG CTATGGTGGGCTCAGCCTGTCCATTGAGGGCCCCAGCAAGGTGGACATCAACACAGAGGACCTGGAGGACGGGAC GTGCAGGGTCACCTACTGCCCCACAGAGCCAGGCAACTACATCATCAACATCAAGTTTGCCGACCAGCACGTGCC TGGCAGCCCTTCTCTGTGAAGGTGACAGGCGAGGGCCGGGTGAAAGAGAGCATCACCCGCAGGCGTCGGGCTCC TTCAGTGGCCAACGTTGGTAGTCATTGTGACCTCAGCCTGAAAATCCCTGAAATTAGCATCCAGGATATGACAGC CCAGGTGACCAGCCCATCGGGCAAGACCCATGAGGCCGAGATCGTGGAAGGGGAGAACCACACCTACTGCATCCG CTTTGTTCCCGCTGAGATGGGCACACACACACTCAGCGTGAAGTACAAGGGCCAGCACGTGCCTGGGAGCCCCTT TGAAGCTGGAGTGCCAGCCGAATTCAGTATCTGGACCCGGGAAGCTGGTGCTGGAGGCCTGGCCATTGCTGTCGA GGGCCCCAGCAAGGCTGAGATCTCTTTTGAGGACCGCAAGGACGGCTCCTGTGGTGTGGCTTATGTGGTCCAGGA GCCAGGTGACTACGAAGTCTCAGTCAAGTTCAACGAGGAACACATTCCCGACAGCCCCTTCGTGGTGCCTGTGGC

GGTCCGTTTCCTGCCGTCAGCTGCCGGCCGAGTTGGGTCTCCGTGGTTCAGGCCGGCTCCCCCTTCCTGGTCTCC $\tt CCCAGCGGCAGGAATAGCAGGCAACGTGATTTCAAAGCTGGGCTCAGCCTCTGTTTCTTCTCTCTGTGTAATCGCA$ AACTCCCAGGCAGGAACACCTTTTGCTGTGATGGCCGCGTCATGATGGCCCGGCAAAAGGGCATTTTCTACCTGA CCCTTTTCCTCATCCTGGGGACATGTACACTCTTCTTCGCCTTTGAGTGCCGCTACCTGGCTGTTCAGCTGTCTC CTGCCATCCCTGTATTTGCTGCCATGCTCTTCCTTTTCTCCATGGCTACACTGTTGAGGACCAGCTTCAGTGACC CTGGAGTGATTCCTCGGGCGCTACCAGATGAAGCAGCTTTCATAGAAATGGAGATAGAAGCTACCAATGGTGCGG TGCCCCAGGGCCAGCGACCACCGCCTCGTATCAAGAATTTCCAGATAAACAACCAGATTGTGAAACTGAAATACT GTTACACATGCAAGATCTTCCGGCCTCCCCGGGCCTCCCATTGCAGCATCTGTGACAACTGTGTGGAGCGCTTCG ${\tt ACCATCACTGCCCCTGGGTGGGGAATTGTGTTGGAAAGAGGAACTACCGCTACTTCTACCTCTTCATCCTTTCTC}$ TCTCCCTCCTCACAATCTATGTCTTCGCCTTCAACATCGTCTATGTGGCCCTCAAATCTTTGAAAATTGGCTTCT TGGAGACATTGAAAGAAACTCCTGGAACTGTTCTAGAAGTCCTCATTTGCTTCTTTACACTCTGGTCCGTCGT GACTGACTGGATTTCATACTTTCCTCGTGGCTCTCAACCAGACAACCAATGAAGACATCAAAGGATCATGGACAG GGAAGAATCGCGTCCAGAATCCCTACAGCCATGGCAATATTGTGAAGAACTGCTGTGAAGTGCTGTGTGGCCCCT TGCCCCCCAGTGTGCTGGATCGAAGGGGTATTTTGCCACTGGAGGAAAGTGGAAGTCGACCTCCCAGTACTCAAG GCAGCACTCCCGAAGAGATGCCACCTCCAGAGCCCCCAGAGCCACACGAGGCAGCTGAAGCTGAGAAG<u>TAG</u>C CTATCTATGGAAGAGACTTTGTTTTGTTTTAATTAGGGCTATGAGAGATTTCAGGTGAGAAGTTAAACCTGAGA CAGAGAGCAAGTAAGCTGTCCCTTTTAACTGTTTTTCTTTGGTCTTTAGTCACCCAGTTGCACACTGGCATTTTC ATGGGTCTCTTGGGCCCTGGCACTGGTT

LFLLSCNRKTHFGAGIPIMSVMVVRKKVTRKWEKLPGRNTFCCDGRVMMARQKGIFYLTLFLILGTCTLFFAFEC RYLAVQLSPAIPVFAAMLFLFSMATLLRTSFSDPGVIPRALPDEAAFIEMEIEATNGAVPQGQRPPPRIKNFQIN NQIVKLKYCYTCKIFRPPRASHCSICDNCVERFDHHCPWVGNCVGKRNYRYFYLFILSLSLLTIYVFAFNIVYVA LKSLKIGFLETLKETPGTVLEVLICFFTLWSVVGLTGFHTFLVALNQTTNEDIKGSWTGKNRVQNPYSHGNIVKN CCEVLCGPLPPSVLDRRGILPLEESGSRPPSTQETSSSLLPQSPAPTEHLNSNEMPEDSSTPEEMPPPEPPPQ EAAEAEK

ATGAGGGGGACAATGATGGAGAGAGAAAGCATCAAAAGCTTCTGGAAGCAATCAGTTCCCTTGATGGAAAGAATA GGCGGAAATTGGCTGAGAGGTCTGAGGCTAGTCTGAAGGTGTCAGAGTTCAATGTCAGTTCTGAAGGATCAGGAG AAAAGCTGGTCCTTGCAGATCTGCTTGAGCCTGTTAAAACTTCATCTTCTTTGGCCACTGTGAAAAAGCAACTGA GTAGAGTCAAATCAAAGAAGAAGAGGTGGAGTTACCTCTGAACAAAGAAGAAGATTGAACGGATCCACAGAGAAGTAG TTTTTCCCCTGGAGAAAGAGGGAGCCAGCCATTGCTCCCATTGAACATGTGCTCAGTGGCTGGAAGGCAAGAACTC CCCTGGAGCAGGAAATTTTCAACCTCCTCCATAAGAACAAGCAGCCAGTGACAGACCCTTTACTGACCCCTGTGG AAAAGGCCTCTCTCCGAGCCATGAGCCTAGAAGAGGCCAAAGATGCGACGAGCAGAGCTTCAGAGGGCTCGGGCTC AAGGAAAGGCCAAGAAAGCCCTAAAAGAGTTTGAGCAGCTGCGGAAGGTTAATCCAGCTGCAGCACTAGAAGAAC TGGAAAAATTGAAAAGGCCAGAATGATGGAAAGAATGAGCCTTAAGCACCAAAACAGTGGGAAATGGGCCAAGT CAAAGGCAATTATGGCCAAATATGACCTGGAGGCTCGCCAAGCTATGCAGGAACAGTTGTCTAAGAACAAAGAAC TCCCTGATGTAGTGAATGAAGTGCAGATGAATGCAGATGGGCCGAATCCCTGGATGCTCAGGAGCTGCACCAGTG ACACCAAAGAGGCTGCAACCCAGGAGGACCCTGAGCAACTGCCAGAGCTTGAGGCCCATGGAGTTTCTGAAAGTG AGGGAGAAGAAGACCAGTGGCAGAAGAAGAATTTTGTTGAGAGAATTTGAGGAAAGGCGATCCCTTAGAAAAA GATCTGAGCTCAGCCAAGATGCTGAGCCAGCAGGCAGTCAAGAAACAAAAGATTCTGGCAGCCAGGAGGTGCTGT CTGAATTGAGAGTACTATCTCAGAAATTGAAGGAAAACCATCAGTCCAGGAAGCAAAAAAGCAAGTTCAGAGGGGA TACAGACGCTGGAAGAGCTAGAAGAGCTGGGAAAAGAAGAATGTTTTCAAAATAAGGAGCTTCCCAGACCTGTGT TAGAAGGGCAGCAGTCAGAGGAGGACCCCAAATAATCGCCCTGATGCCCCTAAGGAGAAGAAAAAAAGAAGGAGCAAA TGGAAGATGAAGAGGAGAAACCATAGGCAGATGATAAAGGAAGCTTTTGCTGGGGATGATGTCATCAGAGATT AGTGGGGTGGTGTGGGCCTAAAGCCCAGTGCCAAGAAAAGACGCCGGTTTCTCATTAAAGCCCCTGAGGGTCCTC CAAGAAAAGATAAGAATTTGCCAAATGTGATTATCAATGAGAAGCGCAACATCCACGCAGCTGCTCATCAGGTAC GAGTGCTTCCATATCCATTTACCCACCATTGGCAATTTGAAAGGACCATCCAGACCCCCATAGGATCCACATGGA ACACCCAGAGGGCTTTCCAAAAGCTGACTACTCCCAAGGTCGTCACCAAGCCAGGCCATATCATTAACCCCATAA CCACACGTCACAAAAAACAGCTGAAGAAATGCTCTGTAGATTGAGTTGCTGGAGGAGTGACAGCCAGGAGCCCTG ACTTCACTTCCTTTGGTCCAGTTTTACTCTGATACAGGGTGGATTCCAAAACTGGCTCAGTACATTGCATGTAGT TAAGCCACATTTTAAAAATAAAGGCATTTTTTAATCT

AGAGGAAAGGGAAGGAGGTCCCGAATAGCGGTCGCCGAAATGTTCCGGTGTGGAGGCCTGGCGGCGGGTGCT TTGAAGCAGAAGCTGGTGCCCTTGGTGCGGACCGTGTGCGTCCGAAGCCCGAGGCAGAGGAACCGGCTCCCAGGC AACTTGTTCCAGCGATGGCATGTTCCTCTAGAACTCCAGATGACAAGACAAATGGCTAGCTCTGGTGCATCAGGG GGCAAAATCGATAATTCTGTGTTAGTCCTTATTGTGGGCTTATCAACAGTAGGAGCTGGTGCCTATGCCTACAAG ACTATGAAAGAGACGAAAAAAGATACAATGAAAGAATTTCAGGGTTAGGGCTGACACCAGAACAGAAACAGAAA AAGGCCGCGTTATCTGCTTCAGAAGGAGGAGGAAGTTCCTCAAGACAAGGCGCCCAAGTCATGTTCCTTTCCTGCTA GTATCTGAAGATCCTGAGCTGCCGTACATGCGACCTCCTCTTTCAAAAGAACTGTGGTTTTCAGATGACCCAAAT GTCTCTGCTCAGGACCTGCCTCATATTGAGAATGGTGGTGTGGCTGTCCTCACTGGGAAGAAGGTAGTACAGCTG GATGTGAGAGACAACATGGTGAAACTTAATGATGGCTCTCAAATAACCTATGAAAAAGTGCTTGATTGCAACAGGA GGTACTCCAAGAAGTCTGTCTGCCATTGATAGGGCTGGAGCAGAGGTGAAGAGTAGAACAACGCTTTTCAGAAAG ATTGGAGACTTTAGAAGCTTGGAGAAGATTTCACGGGAAGTCAAATCAATTACGATTATCGGTGGGGGCTTCCTT GGTAGCGAACTGGCCTGTGCTCTTGGCAGAAAGGCTCGAGCCTTGGGCACAGAAGTGATTCAACTCTTCCCCGAG AAAGGAAATATGGGAAAGATCCTCCCCGAATACCTCAGCAACTGGACCATGGAAAAAGTCAGACGAGAGGGGGTT AAGGTGATGCCCAATGCTATTGTGCAATCCGTTGGAGTCAGCAGTGGCAAGTTACTTATCAAGCTGAAAGACGGC AGGAAGGTAGAAACTGACCACATAGTGGCAGCTGTGGGCCTGGAGCCCAATGTTGAGTTGGCCAAGACTGGTGGC CTGGAAATAGACTCAGATTTTGGTGGCTTCCGGGTAAATGCAGAGCTACAAGCACGCTCTAACATCTGGGTGGCA GGAGATGCTGCATGCTTCTACGATATAAAGTTGGGAAGGAGGCGGGTAGAGCACCATGATCACGCTGTTGTGAGT GGAAGATTGGCTGGAGAAAATATGACTGGAGCTGCTAAGCCGTACTGGCATCAGTCAATGTTCTGGAGTGATTTG GGCCCCGATGTTGGCTATGAAGCTATTGGTCTTGTGGACAGTAGTTTGCCCACAGTTGGTGTTTTTTGCAAAAGCA ACTGCACAAGACCCCAAATCTGCCACAGAGCAGTCAGGAACTGGTATCCGATCAGAGAGTGAGACAGAGTCC GAGGCCTCAGAAATTACTATTCCTCCCAGCACCCCGGCAGTTCCACAGGCTCCCGTCCAGGGGGAGGACTACGGC AAAGGTGTCATCTTCTACCTCAGGGACAAAGTGGTCGTGGGGATTGTGCTATGGAACATCTTTAACCGAATGCCA ATAGCAAGGAAGATCATTAAGGACGGTGAGCAGCATGAAGATCTCAATGAAGTAGCCAAACTATTCAACATTCAT GAAGACTGAAGCCCCACAGTGGAATTGGCAA

MFRCGGLAAGALKQKLVPLVRTVCVRSPRQRNRLPGNLFQRWHVPLELQMTRQMASSGASGKIDNSVLVLIVGL
STVGAGAYAYKTMKEDEKRYNERISGLGLTPEQKQKKAALSASEGEEVPQDKAPSHVPFLLIGGGTAAFAAARSI
RARDPGARVLIVSEDPELPYMRPPLSKELWFSDDPNVTKTLRFKQWNGKERSIYFQPPSFYVSAQDLPHIENGGV
AVLTGKKVVQLDVRDNMVKLNDGSQITYEKCLIATGGTPRSLSAIDRAGAEVKSRTTLFRKIGDFRSLEKISREV
KSITIIGGGFLGSELACALGRKARALGTEVIQLFPEKGNMGKILPEYLSNWTMEKVRREGVKVMPNAIVQSVGVS
SGKLLIKLKDGRKVETDHIVAAVGLEPNVELAKTGGLEIDSDFGGFRVNAELQARSNIWVAGDAACFYDIKLGRR
RVEHHDHAVVSGRLAGENMTGAAKPYWHQSMFWSDLGPDVGYEAIGLVDSSLPTVGVFAKATAQDNPKSATEQSG
TGIRSESETESEASEITIPPSTPAVPQAPVQGEDYGKGVIFYLRDKVVVGIVLWNIFNRMPIARKIIKDGEQHED
LNEVAKLFNIHED

GGCGGCTGGAGCAGCGCGGTAGGGTCCTTCGCCAGAGCATCCGGTCCGAGGGCGCACACAGGCAGAAGGCTCGGG GCTCGTCCACTCTCCTCCTCTCTCTCCTCGGCTTTGTGTTGGTGCCTCCGAGCTGCAAGGAGGGTGCG $\tt TGGACGTTCTCTTTGTGTGGAGCCCTCAAGGGGGGGTTGGGGCCCCGGTTCGGTCCGGGGGAG\underline{ATG}\text{CCCCA}$ TCCTGGGCCATGGGAGCCTGCAGCCCGCCTCGGCCGCCTGGCGTCCCTGGAGCTCGACTCGTCGCTGGACC GCTTCTGCGGGGGTACCTTCCCAGACAAGACTGAAGCCACCATCGGCGTGGACTTCAGGGAGAAGACCGTGGAAA TCGAGGGCGAGAAGATCAAGGTTCAGGTGTGGGACACAGCAGGTCAGGAACGTTTCCGCAAAAGCATGGTCGAGC ATTACTACCGCAACGTACATGCCGTGGTCTTCGTCTATGACGTCACCAAGATGACATCTTTCACCAACCTCAAAA TGTGGATCCAAGAATGCAATGGGCATGCTGTGCCCCCACTAGTCCCCAAAGTGCTTGTGGGCAACAAGTGTGACT TGAGGGAACAGATCCAGGTGCCCTCCAACTTAGCCCTGAAATTTGCTGATGCCCACAACATGCTCTTGTTTGAGA CATCGGCCAAGGACCCCAAAGAGACCAGAACGTGGAGTCGATTTCATGTGCTTGGCTTGCCGATTGAAGGCCC AGAAATCCCTGCTGTATCGTGATGCTGAGAGGCAGCAGGGGAAGGTGCAGAAACTGGAGTTCCCACAGGAAGCTA ${\tt ACAGTAAAACTTCCTGTCTTGT} \underline{{\tt TGA}}{\tt AACCAAACGATATAAATACAAGATAAATTATCACTGGAGTTTTTTCTTT$ $\verb|CCCTTTTTCTGTGCCTGCATAATGCTGACACCTGCTTGTTTCCATACAAATTGATATCAAAATAAAATTTGTAT|\\$ **AGATTATC**

MAQPILGHGSLQPASAAGLASLELDSSLDQYVQIRIFKIIVIGDSNVGKTCLTFRFCGGTFPDKTEATIGVDFRE KTVEIEGEKIKVQVWDTAGQERFRKSMVEHYYRNVHAVVFVYDVTKMTSFTNLKMWIQECNGHAVPPLVPKVLVG NKCDLREQIQVPSNLALKFADAHNMLLFETSAKDPKESQNVESIFMCLACRLKAQKSLLYRDAERQQGKVQKLEF PQEANSKTSCPC

MHIWTLSCTSGASWAPVTYWTDHPQPLLPTHLHSSRLPANYIILPTDLRYHCHRHPPHLTNRLWLLVMWTHLGGI RAGHSPWTVIQTAGRPPRSLSPSARPISSPSPETSCVPAT

 ${\tt MFVDENTFSNDALKPSPSMHIWTLSCTSGASWAPVTYWTDHPQPLLPTHLHSSRLPANYIILPTDLRYHCHRHPP}\\ {\tt HLTNRLWLLVMWTHLGGIRAGHSPWTVIQTAGRPPRSLSPSARPISSPSPETSCVPAT}$

FIGURE 6293

6849/6881 FIGURE 6329C

GGAGTGCTATGTCACAGAAATTGACÇAAGATAAGTATGCTGTGCGCTTCATCCCTCGGGAGAATGGCGTTTACCT GATTGACGTCAAGTTCAACGGCACCCACATCCCTGGAAGCCCCTTCAAGATCCGAGTTGGGGAGCCTGGGCATGG AGGGGACCCAGGCTTGGTGTCTGCTTACGGAGCAGGTCTGGAAGGCGGTGTCACAGGGAACCCAGCTGAGTTCGT CGTGAACACGAGCAATGCGGGAGCTGGTGCCCTGTCGGTGACCATTGACGGCCCCTCCAAGGTGAAGATGGATTG CCAGGAGTGCCCTGAGGGCTACCGCGTCACCTATACCCCCATGGCACCTGGCAGCTACCTCATCTCCATCAAGTA CGGCGGCCCCTACCACATTGGGGGCAGCCCCTTCAAGGCCAAAGTCACAGGCCCCCGTCTCGTCAGCAACCACAG CCTCCACGAGACATCATCAGTGTTTGTAGACTCTCTGACCAAGGCCACCTGTGCCCCCCAGCATGGGGCCCCGGG TCCTGGGCCTGCTGACGCCAGCAAGGTGGTGGCCAAGGGCCTGGGGCTGAGCAAGGCCTACGTAGGCCAGAAGAG CAGCTTCACAGTAGACTGCAGCAAAGCAGCCAACAACATGCTGCTGGTGGGGGTTCATGGCCCAAGGACCCCCTG CGAGGAGATCCTGGTGAAGCACGTGGGCAGCCGGCTCTACAGCGTGTCCTACCTGCTCAAGGACAAGGGGGAGTA CCCGTGCCAGCCGGCAGCCCCAAGCCTGCCCGCTACCCAAGCAGCCCCGCCCTCTTCCCCTCAACCCCGGCCC AGGCCGCCCTGCCCGCCTGTCACTGCAGCCGCCCCTGCCCTGTGCCGTGCTGCGCTCACCTGCCTCCCCAG $\tt CCAGCCGCTGACCTCTCGGCTTTCACTTGGGCAGAGGGAGCCATTTGGTGGCGCTGCTTGTCTTTTGGTTCTG$ GCTTCCATTC

6850/6881 FIGURE 6330A

TAAAAATACAGACTCACCAGTTCCTGCTTTGATGTGACATGTGACTCCCCAGAATACACCTTGCTTCTGTAGACC AGCTCCAACAGGATTCC<u>ATG</u>GTAGCTGGGATGTTAGGGCTCAGGGAAGAAAAGTCAGAAGACCAGGACCTCCAGG CCGCCCGGCTGTGCCGGAAGCTTCTGCCTCCCCAAACAGCGGCGCTCCATCATCCGTGACCGGGGACCCATGT ATGATGACCCCACCCTGCCTGAAGGCTGGACACGGAAGCTTAAGCAAAGGAAATCTGGCCGCTCTGCTGGGAAGT ATGATGTGTATTTGATCAATCCCCAGGGAAAAGCCTTTCGCTCTAAAGTGGAGTTGATTGCGTACTTCGAAAAGG TAGGCGACACCCTGGACCCTAATGATTTTGACTTCACGGTAACTGGGAGAGGGAGCCCCTCCCGGCGAGAGC AGAAACCACCTAAGAAGCCCAAATCTCCCAAAGCTCCAGGAACTGGCAGAGGCCGGGGACGCCCCAAAGGGAGCG GCACCACGAGACCCAAGGCGGCCACGTCAGAGGGTGTGCAGGTGAAAAGGGTCCTGGAGAAAAGTCCTGGGAAAGC TCATGGTGATCAAACGCCCCGGCAGGAAGCGAAAAGCTGAGGCCGACCCTCAGGCCATTCCCAAGAAACGGGGCC CTGTGCAGGAGACCGTACTCCCCATCAAGAAGCGCAAGACCCGGGAGACGGTCAGCATCGAGGTCAAGGAAGTGG TGAAGCCCCTGCTGGTGTCCACCCTCGGTGAGAAGAGCGGGAAAGGACTGAAGACCTGTAAGAGCCCTGGGCGGA ACCACCACTCAGAGTCCCCAAAGGCCCCGTGCCACTGCTCCCACCCTGCCCCACCTCCACCTGAGCCCGAGA GCTCCGAGGACCCCACCAGCCCCCTGAGCCCCAGGACTTGAGCAGCAGCGTCTGCAAAGAGGAGAAGATGCCCA GAGGAGGCTCACTGGAGAGCGACGGCTGCCCCAAGGAGCCAGCTAAGACTCAGCCCGCGGTTGCCACCGCCGCCA ${\tt ACAGAGAGGAGCCTGTGGACGCCGGACGCCCGTGACCGAGAGAGTTAGC\underline{\textbf{TGA}}CTTTACACGGAGCGGATTGCAA}$ AGCAAACCAACAAGAATAAAGGCAGCTGTTGTCTCTTCTCCTTATGGGTAGGGCTCTGACAAAGCTTCCCGATTA ACTGAAATAAAAAATATTTTTTTTTTTCTTTCAGTAAACTTAGAGTTTCGTGGCTTCAGGGTGGGAGTAGTTGGAGC ATTGGGGATGTTTTCTTACCGACAAGCACAGTCAGGTTGAAGACCTAACCAGGGCCAGAAGTAGCTTTGCACTT TTCTAAACTAGGCTCCTTCAACAAGGCTTGCTGCAGATACTACTGACCAGACAAGCTGTTGACCAGGCACCTCCC CTCCCGCCCAAACCTTTCCCCCATGTGGTCGTTAGAGACAGAGCGACAGAGCAGTTGAGAGGACACTCCCGTTTT GAGGTGTGAGGCAGGAGACAGTTGGATTCTTTAGAGAAGATGGATATGACCAGTGGCTATGGCCTGTGCGATC ${\tt CCACCGTGGTGGCTCAAGTCTGGCCCCACACCAGCCCCAATCCAAAACTGGCAAGGACGCTTCACAGGACAGGA}$ CTGAACCACAGGAGAGGATGGCCCAGGGTGAGGTGGCATGGTCCATTCTCAAGGGACGTCCTCCAACGGGTGGCG AAATGTTCTTCCAGTTACTTTCCAATTCTCCTTTAGGGACAGCTTAGAATTATTTGCACTATTGAGTCTTCATGT TCCCACTTCAAAACAAACAGATGCTCTGAGAGCAAACTGGCTTGAATTGGTGACATTTAGTCCCTCAAGCCACCA GTTCCCACGAAGCTCCGAAACTCTAAGTGTTTGCTGCAATTTTATAAGGACTTCCTGATTGGTTTCTCTCCC CCCTTCTCTTCCAGGCAGCCGCGGTGCCCAACCACTTGTCGGCTCCAGTCCCCAGAACTCTGCCTTTG TCCTCCTGCTGCCAGTACCAGCCCCACCCTGTTTTGAGCCCTGAGGAGGCCTTGGGCTCTGCTGAGTCCGACCTG GCCTGTCTGTGAAGAGCAAGAGCAGCAAGGTCTTGCTCTCCTAGGTAGCCCCCTCTTCCCTGGTAAGAAAAAG CAAAAGGCATTTCCCACCCTGAACAACGAGCCTTTTCACCCTTCTACTCTAGAGAAGTGGACTGGAGGAGCTGGG ATGCCAGCCGACCTTGACCTCACTCAGAAGTCCAGAGTCTAGCGTAGTGCAGCAGGGCAGTAGCGGTACCAATGC AGAACTCCCAAGACCCGAGCTGGGACCAGTACCTGGGTCCCCAGCCCTTCCTCTCCTCCCCCTTTTCCCTCGGAG TTCTTCTTGAATGGCAATGTTTTGCTTTTGCTCGATGCAGACAGGGGGCCAGAACACCACACATTTCACTGTCTG TCTGGTCCATAGCTGTGGTGTAGGGGCTTAGAGGCATGGGCTTGCTGTGGGTTTTTAATTGATCAGTTTTCATGT

6851/6881 FIGURE 6330B

GGGATCCCATCTTTTTAACCTCTGTTCAGGAAGTCCTTATCTAGCTGCATATCTTCATCATATTTGGTATATCCTT TTCTGTGTTTACAGAGATGTCTCTTATATCTAAATCTGTCCAACTGAGAAGTACCTTATCAAAGTAGCAAATGAG ACAGCAGTCTTATGCTTCCAGAAACACCCACAGGCATGTCCCATGTGAGCTGCCATGAACTGTCAAGTGTGT GTTGTCTTGTGTATTTCAGTTATTGTCCCTGGCTTCCTTACTATGGTGTAATCATGAAGGAGTGAAACATCATAG AAACTGTCTAGCACTTCCTTGCCAGTCTTTAGTGATCAGGAACCATAGTTGACAGTTCCAATCAGTAGCTTAAGA AAAAACCGTGTTTGTCTCTCTGGAATGGTTAGAAGTGAGGGAGTTTGCCCCGTTCTGTTTGTAGAGTCTCATAG TTGGACTTTCTAGCATATATGTGTCCATTTCCTTATGCTGTAAAAGCAAGTCCTGCAACCAAACTCCCATCAGCC CAATCCCTGATCCCTGATCCCTTCCACCTGCTCTGCTGATGACCCCCCCAGCTTCACTTCTGACTCTTCCCCAGG AAGGGAAGGGGGTCAGAAGAGAGGGTGAGTCCTCCAGAACTCTTCCTCCAAGGACAGAAGGCTCCTGCCCCCAT AGTGGCCTCGAACTCCTGGCACTACCAAAGGACACTTATCCACGAGAGCGCAGCATCCGACCAGGTTGTCACTGA GAAGATGTTATTTTGGTCAGTTGGGTTTTTATGTATTATACTTAGTCAAATGTAATGTGGCTTCTGGAATCATT GTCCAGAGCTGCTTCCCCGTCACCTGGGCGTCATCTGGTCCTGGTAAGAGGAGTGCGTGGCCCACCAGGCCCCCC TGTCACCCATGACAGTTCATTCAGGGCCGATGGGGCAGTCGTGGTTGGGAACACAGCATTTCAAGCGTCACTTTA TTTCATTCGGGCCCCACCTGCAGCTCCCTCAAAGAGGCAGTTGCCCAGCCTCTTTCCCTTCCAGTTTATTCCAGA GCTGCCAGTGGGGCCTGAGGCTCCTTAGGGTTTTCTCTCTATTTCCCCCCTTTCTTCTCATTCCCTCGTCTTTCCC AGCTCTCATGCTGCCCTGCCTTGGGGTCAGGTTGACAGGAGGTTGGAGGGAAAGCCTTAAGCTGCAGGATTCTC ACCAGCTGTGTCCGGCCCAGTTTTGGGGTGTGACCTCAATTTCAATTTTGTCTGTACTTGAACATTATGAAGATG GGGGCCTCTTTCAGTGAATTTGTGAACAGCAGAATTGACCGACAGCTTTCCAGTACCCATGGGGCTAGGTCATTA TCTTGACAGCTCAGTGAGCTGGAGATACTTGGTCACAGCCAGGCGCTAGCACAGCTCCCTTCTGTTGATGCTGTA TTCCCATATCAAAAGACACAGGGGACACCCAGAAACGCCACATCCCCCAATCCATCAGTGCCAAACTAGCCAACG GCCCCAGCTTCTCAGCTCGCTGGATGGCGGAAGCTGCTACTCGTGAGCGCCAGTGCGGGTGCAGACAATCTTCTG TTGGGTGGCATCATTCCAGGCCCGAAGCATGAACAGTGCACCTGGGACAGGGAGCAGCCCCAAATTGTCACCTGC TTCTCTGCCCAGCTTTTCATTGCTGTGACAGTGATGGCGAAAGAGGGGTAATAACCAGACACAAACTGCCAAGTTG GGTGGAGAAAGGAGTTTCTTTAGCTGACAGAATCTCTGAATTTTAAATCACTTAGTAAGCGGCTCAAGCCCAGGA GGGAGCAGAGGGATACGAGCGGAGTCCCCTGCGCGGGACCATCTGGAATTGGTTTAGCCCAAGTGGAGCCTGACA GCCAGAACTCTGTGTCCCCCGTCTAACCACAGCTCCTTTTCCAGAGCATTCCAGTCAGGCTCTCTGGGCTGACTG GGCCAGGGGAGGTTACAGGTACCAGTTCTTTAAGAAGATCTTTGGGCATATACATTTTTAGCCTGTGTCATTGCC CCAAATGGATTCCTGTTTCAAGTTCACACCTGCAGATTCTAGGACCTGTGTCCTAGACTTCAGGGAGTCAGCTGT TTCTAGAGTTCCTACCATGGAGTGGGTCTGGAGGACCTGCCCGGTGGGGGGGCAGAGCCCTGCTCCCGGGTC TTCCTACTCTCTCTCTCTGACGGGATTTGTTGATTCTCTCCATTTTGGTGTCTTTCTCTTTTAGATATTGT ATCAATCTTTAGAAAAGGCATAGTCTACTTGTTATAAATCGTTAGGATACTGCCTCCCCCAGGGTCTAAAATTAC ATATTAGAGGGGAAAAGCTGAACACTGAAGTCAGTTCTCAACAATTTAGAAGGAAAACCTAGAAAACATTTGGCA GAAAATTACATTTCGATGTTTTTGAATGAATACGAGCAAGCTTTTACAACAGTGCTGATCTAAAAATACTTAGCA CTTGGCCTGAGATGCCTGGTGAGCATTACAGGCAAGGGGAATCTGGAGGTAGCCGACCTGAGGACATGGCTTCTG AACCTGTCTTTTGGGAGTGGTATGGAAGGTGGAGCGTTCACCAGTGACCTGGAAGGCCCAGCACCACCCTCCTTC CCACTCTTCTCATCTTGACAGAGCCTGCCCCAGCGCTGACGTGTCAGGAAAACACCCCAGGGAACTAGGAAGGCAC TTCTGCCTGAGGGGCAGCCTGCCTTGCCCACTCCTGCTCGCCTCGGATCAGCTGAGCCTTCTGAGCTGGC GAGGGAGCACAACCCCCAGCTCCCGCTCCGGGCTCCGACTTGTGCACAGGCAGAGCCCAGACCCTGGAGGAAATC CTACCTTTGAATTCAAGAACATTTGGGGAATTTGGAAATCTCTTTGCCCCCAAACCCCCATTCTGTCCTACCTTT AATCAGGTCCTGCTCAGCAGTGAGAGCAGATGAGGTGAAAAAGGCCAAGAGGTTTGGCTCCTGCCCACTGATAGCC CCTCTCCCCGCAGTGTTTGTGTGTCAAGTGGCAAAGCTGTTCTTCCTGGTGACCCTGATTATATCCAGTAACACA TAGACTGTGCGCATAGGCCTGCTTTGTCTCCTCTATCCTGGGCTTTTGTTTTGCTTTTAGTTTTGCTTTTAGTT

6852/6881 FIGURE 6330C

ATCTGTCTGCTGGTCACTTCTTCTGTCCAAGCAGATTCGTGGTCTTTTCCTCGCTTCTTTCAAGGGCTTTCCTGT GCCAGGTGAAGGAGGCTCCAGGCAGCACCCAGGTTTTGCACTCTTGTTTCTCCCGTGCTTGTGAAAGAGGTCCCA AGGTTCTGGGTGCAGGAGCGCTCCCTTGACCTGCTGAAGTCCGGAACGTAGTCGGCACAGCCTGGTCGCCTTCCA CCTCTGGGAGCTGGAGTCCACTGGGGTGGCCTGACTCCCCAGTCCCCTTCCCGTGACCTGGTCAGGGTGAGCCC ATGTGGAGTCAGCCTCGCAGGCCTCCCTGCCAGTAGGGTCCGAGTGTTTTCATCCTTCCCACTCTGTCGAGCCT GGGGGCTGGAGCGGAGACGGGAGGCCTGGCCTGTCTCGGAACCTGTGAGCTGCACCAGGTAGAACGCCAGGGACC ${\tt CCAGAATCATGTGCGTCAGTCCAAGGGGTCCCCTCCAGGAGTAGTGAAGACTCCAGAAATGTCCCTTTCTTCTCCC}$ $\tt CCCATCCTACGAGTAATTGCATTTGCTTTTGTAATTCTTAATGAGCAATATCTGCTAGAGAGTTTAGCTGTAACA$ GCATTATAATCACCAGGGCCAAAAGCTTCCCTCCTGCTGTCATTGCTTCTTCTGAGGCCTGAATCCAAAAGAAA AACAGCCATAGGCCCTTTCAGTGGCCGGGCTACCCGTGAGCCCTTCGGAGGACCAGGGCTGGGGCAGCCTCTGGG ACGTGCGTGTTTTCTGACTGACATGAAATCGACGCCCGAGTTAGCCTCACCCGGTGACCTCTAGCCCTGCCCGGA TGGAGCGGGCCCACCCGGTTCAGTGTTTCTGGGGAGCTGGACAGTGGAGTGCAAAAGGCTTGCAGAACTTGAAG GAGTCAGTAGTCAATGAATATATGACCAAATATCACCAGGACTGTTACTCAATGTGTGCCGAGCCCTTGCCCATG TTGTCTTTCTGGGGTTTTCTGTTTGGGTTTGGTTTTATTTCTCCTTTTGTGTTCCAAACATGAGGTTC AAGTAAATCTCTTCTGTGTTTGAACTGAAGTCTGTATTGTAACTATGTTTAAAGTAATTGTTCCAGAGACAAATA TGAACAGATGACCCCTGCCCAGATCAGCCAGAAGCCACCCAAAGCAGTGGAGCCCAGGAGTCCCACTCCAAGCCA GCAAGCCGAATAGCTGATGTGTTGCCACTTTCCAAGTCACTGCAAAACCAGGTTTTGTTCCGCCCAGTGGATTCT TGTTTTGCTTCCCCTCCCCCGAGATTATTACCACCATCCCGTGCTTTTAAGGAAAGGCAAGATTGATGTTTCCT GGAGGCTGGGACGCTCTGCTGTGGGCACAGGTCAGGCTAATGTTGGCAGATGCAGCTCTTCCTGGACAGGCCAGG TGGTGGGCATTCTCTCCCAAGGTGTGCCCCGTGGGCATTACTGTTTAAGACACTTCCGTCACATCCCACCCCAT CCTCCAGGGCTCAACACTGTGACATCTCTATTCCCCACCCTCCCCTTCCCAGGGCAATAAAATGACCATGGAGGG GGCTTGCACTCTTTGGCTGTCACCCGATCGCCAGCAAAACTTAGATGTGAGAAAAACCCCTTCCCATTCCATGGC GAAAACATCTCCTTAGAAAAGCCATTACCCTCATTAGGCATGGTTTTGGGCTCCCAAAACACCTGACAGCCCCTC CCTCCTCTGAGAGGCGGAGAGTGCTGACTGTAGTGACCATTGCATGCCGGGTGCAGCATCTGGAAGAGCTAGGCA GGGTGTCTGCCCCCTCCTGAGTTGAAGTCATGCTCCCCTGTGCCAGCCCAGAGGCCGAGAGCTATGGACAGCATT GCCAGTAACACAGGCCACCCTGTGCAGAAGGGAGCTGGCTCCAGCCTGGAAACCTGTCTGAGGTTGGGAGAGGTG CACTTGGGGCACAGGGAGAGGCCGGGACACACTTAGCTGGAGATGTCTCTAAAAGCCCTGTATCGTATTCACCTT TTTGTAGTGTTCAGAAAAAAGGTTCTTTGTGTATAGCCAAATGACTGAAAGCACTGATATATTTAAAAAACAAAAG GCAATTTATTAAGGAAATTTGTACCATTTCAGTAAACCTGTCTGAATGTACCTGTATACGTTTCAAAAACACCCC CCCCCACTGAATCCCTGTAACCTATTTATTATATAAAGAGTTTGCCTTATAAATTT

MVAGMLGLREEKSEDQDLQGLKDKPLKFKKVKKDKKEEKEGKHEPVQPSAHHSAEPAEAGKAETSEGSGSAPAVP EASASPKQRRSIIRDRGPMYDDPTLPEGWTRKLKQRKSGRSAGKYDVYLINPQGKAFRSKVELIAYFEKVGDTSL DPNDFDFTVTGRGSPSRREQKPPKKPKSPKAPGTGRGRGRPKGSGTTRPKAATSEGVQVKRVLEKSPGKLLVKMP FQTSPGGKAEGGGATTSTQVMVIKRPGRKRKAEADPQAIPKKRGRKPGSVVAAAAAEAKKKAVKESSIRSVQETV LPIKKRKTRETVSIEVKEVVKPLLVSTLGEKSGKGLKTCKSPGRKSKESSPKGRSSSASSPPKKEHHHHHHHSES PKAPVPLLPPLPPPPPEPESSEDPTSPPEPQDLSSSVCKEEKMPRGGSLESDGCPKEPAKTQPAVATAATAAEKY KHRGEGERKDIVSSSMPRPNREEPVDSRTPVTERVS

CGCGGACCGGCCGGCCAGGCCCGCCGCCGCGCCGCAGAGAGACCCCGGCAGGTCCCGGCAGCGCGGCGGCGC AGCC<u>ATG</u>GCCGGGGGGCCGGGGGGGGGGGCCCGCAGCCCCAGCACTTCTTGTACGAGGTGCCGCC CTGGGTCATGTGCCGCTTCTACAAAGTGATGGACGCCCTGGAGCCCGCCGACTGGTGCCAGTTCGCCGCCCTGAT CGTGCGCGACCAGACCGAGCTGCGGCTGTGCGAGCGCTCCGGGCAGCGCCAGCGCCAGCGTCCTGTGGCCCTGGAT CAACCGCAACGCCCGTGTGGCCGACCTCGTGCACATCCTCACGCACCTGCAGCTGCTCCGTGCGCGGGACATCAT CACAGCCTGGCACCCTCCCGCCCCGCTTCCGTCCCCAGGCACCACTGCCCCGAGGCCCAGCAGCATCCCTGCACC CGCCGAGGCCGAGGCCTGGAGCCCCGGAAGTTGCCATCCTCAGCCTCCACCTTCCTCCCCAGCTTTTCCAGG $\verb|CTCCCAGACCCATTCAGGGCCTGAGCTCGGCCTGGTTCCAAGCCCTGCTTCCCTGTGGCCTCCACCGCCATCTCC| \\$ CTGGCCCCTCTGTGAGATTTCCCGGGGCACCCACAACTTCTCGGAGGAGCTCAAGATCGGGGAGGGTGGCTTTGG GTGCGTGTACCGGGCGGTGATGAGGAACACGGTGTATGCTGTGAAGAGGCTGAAGGAGAACGCTGACCTGGAGTG GACTGCAGTGAAGCAGAGCTTCCTGACCGAGGTGGAGCAGCTGTCCAGGTTTCGTCACCCAAACATTGTGGACTT TGCTGGCTACTGTGCTCAGAACGGCTTCTACTGCCTGGTGTACGGCTTCCTGCCCAACGGCTCCCTGGAGGACCG TCTCCACTGCCAGACCCAGGCCTGCCCACCTCTCTCCTGGCCTCAGCGACTGGACATCCTTCTGGGTACAGCCCG GGCAATTCAGTTTCTACATCAGGACAGCCCCAGCCTCATCCATGGAGACATCAAGAGTTCCAACGTCCTTCTGGA TGAGAGGCTGACACCCAAGCTGGGAGACTTTGGCCTGGCCCGGTTCAGCCGCTTTGCCGGGTCCAGCCCAGCCA GAGCAGCATGGTGGCCCGGACACAGACAGTGCGGGGCACCCTGGCCTACCTGCCCGAGGAGTACATCAAGACGGG AAGGCTGGCTGTGGACACGGACACCTTCAGCTTTGGGGTGGTAGTGCTAGAGACCTTGGCTGGTCAGAGGGCTGT GAAGACGCACGGTGCCAGGACCAAGTATCTGAAAGACCTGGTGGAAGAGGAGGCTGAGGAGGCTGGAGTGGCTTT GAGAAGCACCCAGAGCACCTGCAAGCAGGTCTGGCTGCAGATGCCTGGGCTGCTCCCATCGCCATGCAGATCTA CAAGAAGCACCTGGACCCCAGGCCCGGGCCCTGCCCACCTGAGCTGGGCCTGGGCCTGGGCCAGCTGGCCTGCTG GGTGGCGGGGGTGCCCGGGCATTTGGAGGCCGCCAGCTGCATCCCCCCTTCCCCGCAGGAGAACTCCTACGTGTC CAGCACTGGCAGAGCCCACAGTGGGGCTGCTCCATGGCAGCCCCTGGCAGCGCCATCAGGAGCCAGTGCCCAGGC AGCAGAGCAGCTGCAGAGAGGCCCCAACCAGCCCGTGGAGAGTGACGAGAGCCTAGGCGGCCTCTCTGCTGCCCT GCGCTCCTGGCACTTGACTCCAAGCTGCCCTCTGGACCCAGCACCCCTCAGGGAGGCCGGCTGTCCTCAGGGGGA CACGGCAGGAGATCGAGCTGGGGGAGTGGCCCAGGATCCCGGCCCACAGCCGTGGAAGGACTGGCCCTTGGCAG CTCTGCATCATCGTCGTCAGAGCCACCGCAGATTATCATCAACCCTGCCCGACAGAAGATGGTCCAGAAGCTGGC CCTGTACGAGGATGGGGCCCTGGACAGCCTGCAGCTGCTGTCGTCCAGCTCCCAGGCTTGGGCCTGGAACA ${\tt GGACAGGCAGGGGCCCGAAGAAAGTGATGAATTTCAGAGC\underline{{\tt TGA}}{\tt TGTGTTCACCTGGGCAGATCCCCCAAATCCGG}$ AAGTCAAAGTTCTCATGGTCAGAAGTTCTCATGGTGCACGAGTCCTCAGCACTCTGCCGGCAGTGGGGGTGGGGG CCTGCCTCCATGCCAGCATCTGGGGGCAAGGAAGGCTGGCATCATCCAGTGAGGAGGCTGGCGCATGTTGGGAGG CTGCTGGCTGCACAGACCCGTGAGGGGAGGAGAGGGGGCTGCTGTGCAGGGGTGTGGAGTAGGGAGCTGGCTCCCC TGAGAGCCATGCAGGGCGTCTGCAGCCCAGGCCTCTGGCAGCAGCTCTTTGCCCCATCTCTTTGGACAGTGGCCAC $\verb|CCTGCACAATGGGGCCGACGAGGGCCTAGGGCCCTCCTACCTGCTTACAATTTGGAAAAGTGTGGCCGGGTGCGGT$ GGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCAGGAGGATCGCTGGAGCCCAGTAGGTCAAGACCAG CCAGGGCAACATGATGAGACCCTGTCTCTGCCAAAAAATTTTTTAAACTATTAGCCTGGCGTGGTAGCGCACGCC TGTGGTCCCAGCTGCTGGGGAGGCTGAAGTAGGAGGATCATTTATGCTTGGGAGGTCGAGGCTGCAGTGAGTCAT GATTGTATGACTGCACCCCAGCCTGGGTGACAGAGCCAAGACCCTGTTTCAAAAAAGAAAAACCCTGGGAAAAGTGA AGTATGGCTGTAAGTCTCATGGTTCAGTCCTAGCAAGAAGCGAGAATTCTGAGATCCTCCAGAAAGTCGAGCAGC ACCCACCTCCAACCTCGGGCCAGTGTCTTCAGGCTTTACTGGGGACCTGCGAGCTGGCCTAATGTGGTGGCCTGC AAGCCAGGCCATCCCTGGGCGCCACAGACGAGCTCCGAGCCAGGTCAGGCTTCGGAGGCCACAAGCTCAGCCTCA TGAGAAGCCCCTGGAAGGCAGAAAAGTTGGGAGCATGGCAGACAGGGAAAGGAAACATTTTCAGGGAAAAGACAT GTATCACATGTCTTCAGAAGCAAGTCAGGTTTCATGTAACCGAGTGTCCTCTTGCGTGTCCAAAAGTAGCCCAGG GCTGTAGCACAGGCTTCACAGTGATTTTGTGTTCAGCCGTGAGTCACACTACATGCCCCCGTGAAGCTGGGCATT

WO 2004/030615 PCT/US2003/028547

6855/6881 FIGURE 6333

MAGGPGPGEPAAPGAQHFLYEVPPWVMCRFYKVMDALEPADWCQFAALIVRDQTELRLCERSGQRTASVLWPWIN RNARVADLVHILTHLQLLRARDIITAWHPPAPLPSPGTTAPRPSSIPAPAEAEAWSPRKLPSSASTFLSPAFPGS QTHSGPELGLVPSPASLWPPPPSPAPSSTKPGPESSVSLLQGARPSPFCWPLCEISRGTHNFSEELKIGEGGFGC VYRAVMRNTVYAVKRLKENADLEWTAVKQSFLTEVEQLSRFRHPNIVDFAGYCAQNGFYCLVYGFLPNGSLEDRL HCQTQACPPLSWPQRLDILLGTARAIQFLHQDSPSLIHGDIKSSNVLLDERLTPKLGDFGLARFSRFAGSSPSQS SMVARTQTVRGTLAYLPEEYIKTGRLAVDTDTFSFGVVVLETLAGQRAVKTHGARTKYLKDLVEEEAEEAGVALR STQSTLQAGLAADAWAAPIAMQIYKKHLDPRPGPCPPELGLGLGQLACCCLHRRAKRRPPMTQVYERLEKLQAVV AGVPGHLEAASCIPPSPQENSYVSSTGRAHSGAAPWQPLAAPSGASAQAAEQLQRGPNQPVESDESLGGLSAALR SWHLTPSCPLDPAPLREAGCPQGDTAGESSWGSGPGSRPTAVEGLALGSSASSSSSEPPQIIINPARQKMVQKLAL YEDGALDSLQLLSSSSLPGLGLEQDRQGPEESDEFQS

6856/6881 FIGURE 6334A

TTATCCAGATCCCGAGGAATATGAAGGACACCATGTGATGGAGCCACCTGTCATCACGGAACAGTCTCCACGGC GCCTGGTTGTCTTCCCCACAGATGACATCAGCCTCAAGTGTGAGGCCAGTGGCAAGCCCGAAGTGCAGTTCCGCT GGACGAGGGATGGTGTCCACTTCAAACCCAAGGAAGAGCTGGGTGTGACCGTGTACCAGTCGCCCCACTCTGGCT CCTTCACCATCACGGGCAACAACAGCAACTTTGCTCAGAGGTTCCAGGGCATCTACCGCTGCTTTGCCAGCAATA AGCTGGGCACCGCCATGTCCCATGAGATCCGGCTCATGGCCGAGGGGGCCCCCAAGTGGCCAAAGGAGACAGTGA AGCCCGTGGAGGTGGAGGAGGGGGTCAGTGGTTCTGCCTTGCAACCCTCCCCCAAGTGCAGAGCCTCTCCGGA TCTACTGGATGAACAGCAAGATCTTGCACATCAAGCAGGACGAGCGGGTGACGATGGGCCAGAACGGCAACCTCT ACTTTGCCAATGTGCTCACCTCCGACAACCACTCAGACTACATCTGCCACGCCCACTTCCCAGGCCCACGACCA TCATTCAGAAGGAACCCATTGACCTCCGGGTCAAGGCCACCAACAGCATGATTGACAGGAAGCCGCCCTGCTCT TCCCCACCAACTCCAGCAGCCACCTGGTGGCCTTGCAGGGGCAGCCATTGGTCCTGGAGTGCATCGCCGAGGGCT TTCCCACGCCCACCATCAAATGGCTGCGCCCCAGTGGCCCCATGCCAGCCGTGTCACCTACCAGAACCACA ACAAGACCCTGCAGCTGCTGAAAGTGGGCGAGGATGATGGCGAGTACCGCTGCCTGGCCGAGAACTCACTGG GCAGTGCCCGGCATGCGTACTATGTCACCGTGGAGGCTGCCCCGTACTGGCTGCACAAGCCCCAGAGCCATCTAT ATGGGCCAGGAGAGACTGCCCGCCTGGACTGCCAAGTCCAGGGCAGGCCCCAACCAGAGGTCACCTGGAGAATCA ACGGGATCCCTGTGGAGGAGCTGGCCAAAGAĆCAGAAGTACCGGATTCAGCGTGGCGCCCTGATCCTGAGCAACG TGCAGCCCAGTGACACAATGTGACCCAATGTGAGGCCCGCAACCGGCACGGGCTCTTGCTGGCCAATGCCTACA TCTACGTTGTCCAGCTGCCAGCCAAGATCCTGACTGCGGACAATCAGACGTACATGGCTGTCCAGGGCAGCACTG CCTACCTTCTGTGCAAGGCCTTCGGAGCGCCTGTGCCCAGTGTTCAGTGGCTGGACGAGGATGGGACAACAGTGC TTCAGGACGAACGCTTCTTCCCCTATGCCAATGGGACCCTGGGCATTCGAGACCTCCAGGCCAATGACACCGGAC GCTACTTCTGCCTGGCTGCCAATGACCAAAACAATGTTACCATCATGGCTAACCTGAAGGTTAAAGATGCAACTC AGATCACTCAGGGGCCCCGCAGCACAATCGAGAAGAAAGGTTCCAGGGTGACCTTCACGTGCCAGGCCTCCTTTG ACCCCTCCTTGCAGCCCAGCATCACCTGGCGTGGGGACGGTCGAGACCTCCAGGAGCTTGGGGACAGTGACAAGT ACTTCATAGAGGATGGCCCCTGGTCATCCACAGCCTGGACTACAGCGACCAGGGCAACTACAGCTGCGTGGCCA GTACCGAACTGGATGTGGTGGAGAGTAGGGCACAGCTCTTGGTGGTGGGGAGCCCTGGGCCGGTGCCACGGCTGG TGCTGTCCGACCTGCACCTGCTGACGCAGAGCCAGGTGCGCGTGTCCTGGAGTCCTGCAGAAGACCACAATGCCC CCATTGAGAAATATGACATTGAATTTGAGGACAAGGAAATGGCGCCTGAAAAATGGTACAGTCTGGGCAAGGTTC CAGGGAACCAGACCTCTACCACCCTCAAGCTGTCGCCCTATGTCCACTACACCTTTAGGGTTACTGCCATAAACA AATATGGCCCCGGGGAGCCCAGCCCGGTCTCTGAGACTGTGGTCACACCTGAGGCAGCCCCAGAGAAGAACCCTG ACGCCCCCAGGTTCAGTACCGCGTGCAGTGGCGCCCTCAGGGGGACACGAGGGCCCTGGCAGGAGCAGATTGTCA GCGACCCCTTCCTGGTGGTGTCCAACACGTCCACCTTCGTGCCCTATGAGATCAAAGTCCAGGCCGTCAACAGCC AGGGCAAGGGACCAGAGCCCCAGGTCACTATCGGCTACTCTGGAGAGGACTACCCCCAGGCAATCCCTGAGCTGG AAGGCATTGAAATCCTCAACTCAAGTGCCGTGCTGGTCAAGTGGCGGCCGGTGGACCTGGCCCAGGTCAAGGGCC ACCTCCGCGGATACAATGTGACGTACTGGAGGGAGGGCAGTCAGAGGAAGCACAGCAAGAGACATATCCACAAAG ACCATGTGGTGGTGCCCGCCAACACCACGTGTCATCCTCAGTGGCTTGCGGCCCTATAGCTCCTACCACCTGG AGGTGCAGGCCTTTAACGGGCGAGGATCGGGGCCCGCCAGCGAGTTCACCTTCAGCACCCCAGAGGGAGTGCCTG GCCACCCGAGGCGTTGCACCTGGAGTGCCAGTCGAACACCAGCCTGCTGCTGCTGGCAGCCCCCACTCAGCC ACAACGGCGTGCTCACCGGCTACGTGCTCTCCTACCACCCCTGGATGAGGGGGGCAAGGGGCAACTGTCCTTCA ACCTTCGGGACCCCGAACTTCGGACACACACCTGACCGATCTCAGCCCCCACCTGCGGTACCGCTTCCAGCTTC AGGCCACCACAAAGAGGGCCCTGGTGAAGCCATCGTACGGGAAGGAGGCACTATGGCCTTGTCTGGGATCTCAG ATTTTGGCAACATCTCAGCCACAGCGGGTGAAAACTACAGTGTCGTCTCCTGGGTCCCCAAGGAGGGCCAGTGCA ACTTCAGGTTCCATATCTTGTTCAAAGCCTTGGGAGAAGAGAGGGTGGGGCTTCCCTTTCGCCACAGTATGTCA GCTACAACCAGAGCTCCTACACGCAGTGGGACCTGCAGCCTGACACTGACTACGAGATCCACTTGTTTAAGGAGA CTGAGGGCTGGTTCATCGGCTTTGTGAGTGCCATCATCCTCCTGCTCCTCGTCCTGCTCATCCTCTGCTTCATCA

6857/6881 FIGURE 6334B

MVVALRYVWPLLLCSPCLLIQIPEEYEGHHVMEPPVITEQSPRRLVVFPTDDISLKCEASGKPEVQFRWTRDGVH FKPKEELGVTVYOSPHSGSFTITGNNSNFAQRFQGIYRCFASNKLGTAMSHEIRLMAEGAPKWPKETVKPVEVEE GESVVLPCNPPPSAEPLRIYWMNSKILHIKQDERVTMGQNGNLYFANVLTSDNHSDYICHAHFPGTRTIIQKEPI DLRVKATNSMIDRKPRLLFPTNSSSHLVALQGQPLVLECIAEGFPTPTIKWLRPSGPMPADRVTYQNHNKTLQLL KVGEEDDGEYRCLAENSLGSARHAYYVTVEAAPYWLHKPQSHLYGPGETARLDCQVQGRPQPEVTWRINGIPVEE LAKDQKYRIQRGALILSNVQPSDTMVTQCEARNRHGLLLANAYIYVVQLPAKILTADNQTYMAVQGSTAYLLCKA ${\tt FGAPVPSVQWLDEDGTTVLQDERFFPYANGTLGIRDLQANDTGRYFCLAANDQNNVTIMANLKVKDATQITQGPR}$ ${\tt STIEKKGSRVTFTCQASFDPSLQPSITWRGDGRDLQELGDSDKYFIEDGRLVIHSLDYSDQGNYSCVASTELDVV}$ ESRAQLLVVGSPGPVPRLVLSDLHLLTQSQVRVSWSPAEDHNAPIEKYDIEFEDKEMAPEKWYSLGKVPGNQTST $\verb|TLKLSPYVHYTFRVTAINKYGPGEPSPVSETVVTPEAAPEKNPVDVKGEGNETTNMVITWKPLRWMDWNAPQVQY|\\$ ${\tt RVQWRPQGTRGPWQEQIVSDPFLVVSNTSTFVPYEIKVQAVNSQGKGPEPQVTIGYSGEDYPQAIPELEGIEILN}$ SSAVLVKWRPVDLAQVKGHLRGYNVTYWREGSQRKHSKRHIHKDHVVVPANTTSVILSGLRPYSSYHLEVQAFNG ${\tt RGSGPASEFTFSTPEGVPGHPEALHLECQSNTSLLLRWQPPLSHNGVLTGYVLSYHPLDEGGKGQLSFNLRDPEL}$ RTHNLTDLSPHLRYRFQLQATTKEGPGEAIVREGGTMALSGISDFGNISATAGENYSVVSWVPKEGQCNFRFHIL FKALGEEKGGASLSPQYVSYNQSSYTQWDLQPDTDYEIHLFKERMFRHQMAVKTNGTGRVRLPPAGFATEGWFIG FVSAIILLLLVLLILCFIKRSKGGKYSVKDKEDTQVDSEARPMKDETFGEYRSLESDNEEKAFGSSQPSLNGDIK ${\tt PLGSDDSLADYGGSVDVQFNEDGSFIGQYSGKKEKEAAGGNDSSGATSPINPAVALE}$

6859/6881 FIGURE 6336A

TTATCCAGATCCCCGAGGAATATGAAGGACACCATGTGATGGAGCCACCTGTCATCACGGAACAGTCTCCACGGC GCCTGGTTGTCTTCCCCACAGATGACATCAGCCTCAAGTGTGAGGCCAGTGGCAAGCCCGAAGTGCAGTTCCGCT GGACGAGGGATGGTGTCCACTTCAAACCCAAGGAAGAGCTGGGTGTGACCGTGTACCAGTCGCCCCACTCTGGCT CCTTCACCATCACGGGCAACAACAGCAACTTTGCTCAGAGGTTCCAGGGCATCTACCGCTGCTTTGCCAGCAATA AGCTGGGCACCGCCATGTCCCATGAGATCCGGCTCATGGCCGAGGGTGCCCCCAAGTGGCCAAAGGAGACAGTGA AGCCCGTGGAGGTGGAGGAAGGGGAGTCAGTGGTTCTGCCTTGCAACCCTCCCCAAGTGCAGAGCCTCTCCGGA TCTACTGGATGAACAGCAAGATCTTGCACATCAAGCAGGACGAGCGGGTGACGATGGGCCAGAACGGCAACCTCT ACTTTGCCAATGTGCTCACCTCCGACAACCACTCAGACTACATCTGCCACGCCCACTTCCCAGGCACCAGGACCA TCATTCAGAAGGAACCCATTGACCTCCGGGTCAAGGCCACCAACAGCATGATTGACAGGAAGCCGCCCCTGCTCT TCCCCACCAACTCCAGCAGCCACCTGGTGGCCTTGCAGGGGCAGCCATTGGTCCTGGAGTGCATCGCCGAGGGCT TTCCCACGCCACCATCAAATGGCTGCGCCCCAGTGGCCCATGCCAGCCGACCGTGTCACCTACCAGAACCACA ACAAGACCCTGCAGCTGCAAAGTGGGCGAGGAGGATGATGGCGAGTACCGCTGCCTGGCCGAGAACTCACTGG GCAGTGCCCGGCATGCGTACTATGTCACCGTGGAGGCTGCCCCGTACTGGCTGCACAAGCCCCAGAGCCATCTAT ATGGGCCAGGAGAGACTGCCCGCCTGGACTGCCAAGTCCAGGGCAGGCCCCAACCAGAGGTCACCTGGAGAATCA ACGGGATCCCTGTGGAGGAGCTGGCCAAAGACCAGAAGTACCGGATTCAGCGTGGCGCCCTGATCCTGAGCAACG TGCAGCCCAGTGACACAATGGTGACCCCAATGTGAGGCCCGCAACCGGCACGGGCTCTTGCTGGCCAATGCCTACA TCTACGTTGTCCAGCTGCCAGCCAAGATCCTGACTGCGGACAATCAGACGTACATGGCTGTCCAGGGCAGCACTG CCTACCTTCTGTGCAAGGCCTTCGGAGCGCCTGTGCCCAGTGTTCAGTGGCTGGACGAGGATGGGACAACAGTGC TTCAGGACGAACGCTTCTTCCCCTATGCCAATGGGACCCTGGGCATTCGAGACCTCCAGGCCAATGACACCGGAC GCTACTTCTGCCTGGCTGCCAATGACCAAAACAATGTTACCATCATGGCTAACCTGAAGGTTAAAGATGCAACTC AGATCACTCAGGGGCCCCGCAGCACAATCGAGAAGAAAGGTTCCAGGGTGACCTTCACGTGCCAGGCCTCCTTTG ACCCCTCCTTGCAGCCCAGCATCACCTGGCGTGGGGACGGTCGAGACCTCCAGGAGCTTGGGGACAGTGACAAGT ACTTCATAGAGGATGGGCGCCTGGTCATCCACAGCCTGGACTACAGCGACCAGGGCAACTACAGCTGCGTGGCCA GTACCGAACTGGATGTGGTGGAGAGTAGGGCACAGCTCTTGGTGGTGGGGAGCCCTGGGCCGGTGCCACGGCTGG TGCTGTCCGACCTGCACCTGCTGACGCAGAGCCAGGTGCGCGTGTCCTGGAGTCCTGCAGAAGACCACAATGCCC ${\tt CCATTGAGAAATATGACATTGAGTTTGAGGACAAGGAAATGGCGCCTGAAAAATGGTACAGTCTGGGCAAGGTTC}$ CAGGGAACCAGACCTCTACCACCCTCAAGCTGTCGCCCTATGTCCACTACACCTTTAGGGTTACTGCCATAAACA AATATGGCCCCGGGGAGCCCAGCCCGGTCTCTGAGACTGTGGTCACACCTGAGGCAGCCCCAGAGAAGAACCCTG ACGCCCCCAGGTTCAGTACCGCGTGCAGTGGCGCCCTCAGGGGGACACGAGGGCCCTGGCAGGAGCAGATTGTCA GCGACCCCTTCCTGGTGGTGTCCAACACGTCCACCTTCGTGCCCTATGAGATCAAAGTCCAGGCCGTCAACAGCC AGGGCAAGGGACCAGAGCCCCAGGTCACTATCGGCTACTCTGGAGAGGACTACCCCCAGGCAATCCCTGAGCTGG AAGGCATTGAAATCCTCAACTCAAGTGCCGTGCTGGTCAAGTGGCGGCCGGTGGACCTGGCCCAGGTCAAGGGCC ACCTCCGCGGATACAATGTGACGTACTGGAGGGAGGGCAGTCAGAGGAAGCACAGCAAGAGACATATCCACAAAG ACCATGTGGTGGTGCCCGCCAACACCCCGTGTCATCCTCAGTGGCTTGCGGCCCTATAGCTCCTACCACCTGG AGGTGCAGGCCTTTAACGGGCGAGGATCGGGGCCCGCCAGCGAGTTCACCTTCAGCACCCCAGAGGGAGTGCCTG GCCACCCGAGGCGTTGCACCTGGAGTGCCAGTCGAACACCAGCCTGCTGCTGCGCAGCCCCCACTCAGCC ACAACGGCGTGCTCACCGGCTACGTGCTCTCCTACCACCCCCTGGATGAGGGGGCAAGGGGCAACTGTCCTTCA ACCTTCGGGACCCCGAACTTCGGACACAACCTGACCGATCTCAGCCCCCACCTGCGGTACCGCTTCCAGCTTC AGGCCACCACAAGAGGGCCCTGGTGAAGCCATCGTACGGGAAGGAGGCACTATGGCCTTGTCTGGGATCTCAG ATTTTGGCAACATCTCAGCCACAGCGGGTGAAAACTACAGTGTCGTCTCCTGGGTCCCCAAGGAGGGCCAGTGCA GCTACAACCAGAGCTCCTACACGCAGTGGGACCTGCAGCCTGACACTGACTACGAGATCCACTTGTTTAAGGAGA CTGAGGGCTGGTTCATCGGCTTTGTGAGTGCCATCATCCTCCTGCTCCTGCTCCTGCTCATCCTCTGCTTCATCA

6860/6881 FIGURE 6336B

 ${\tt MVVALRYVWPLLLCSPCLLIQIPEEYEGHHVMEPPVITEQSPRRLVVFPTDDISLKCEASGKPEVQFRWTRDGVH}$ FKPKEELGVTVYQSPHSGSFTITGNNSNFAQRFQGIYRCFASNKLGTAMSHEIRLMAEGAPKWPKETVKPVEVEE GESVVLPCNPPPSAEPLRIYWMNSKILHIKQDERVTMGQNGNLYFANVLTSDNHSDYICHAHFPGTRTIIQKEPI DLRVKATNSMIDRKPRLLFPTNSSSHLVALQGQPLVLECIAEGFPTPTIKWLRPSGPMPADRVTYQNHNKTLQLL KVGEEDDGEYRCLAENSLGSARHAYYVTVEAAPYWLHKPQSHLYGPGETARLDCQVQGRPQPEVTWRINGIPVEE LAKDQKYRIQRGALILSNVQPSDTMVTQCEARNRHGLLLANAYIYVVQLPAKILTADNQTYMAVQGSTAYLLCKA ${\tt FGAPVPSVQWLDEDGTIVLQDERFFPYANGTLGIRDLQANDTGRYFCLAANDQNNVTIMANLKVKDATQITQGPR}$ STIEKKGSRVTFTCQASFDPSLQPSITWRGDGRDLQELGDSDKYFIEDGRLVIHSLDYSDQGNYSCVASTELDVV ESRAQLLVVGSPGPVPRLVLSDLHLLTQSQVRVSWSPAEDHNAPIEKYDIEFEDKEMAPEKWYSLGKVPGNQTST TLKLSPYVHYTFRVTAINKYGPGEPSPVSETVVTPEAAPEKNPVDVKGEGNETTNMVITWKPLRWMDWNAPQVQY RVQWRPQGTRGPWQEQIVSDPFLVVSNTSTFVPYEIKVQAVNSQGKGPEPQVTIGYSGEDYPQAIPELEGIEILN SSAVLVKWRPVDLAQVKGHLRGYNVTYWREGSQRKHSKRHIHKDHVVVPANTTSVILSGLRPYSSYHLEVQAFNG RGSGPASEFTFSTPEGVPGHPEALHLECQSNTSLLLRWQPPLSHNGVLTGYVLSYHPLDEGGKGQLSFNLRDPEL RTHNLTDLSPHLRYRFQLQATTKEGPGEAIVREGGTMALSGISDFGNISATAGENYSVVSWVPKEGQCNFRFHIL ${\tt FKALGEEKGGASLSPQYVSYNQSSYTQWDLQPDTDYEIHLFKERMFRHQMAVKTNGTGRVRLPPAGFATEGWFIG}$ FVSAIILLLVLLILCFIKRSKGGKYSVKDKEDTQVDSEARPMKDETFGEYSDNEEKAFGSSQPSLNGDIKPLGS DDSLADYGGSVDVQFNEDGSFIGQYSGKKEKEAAGGNDSSGATSPINPAVALE

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6863/6881 FIGURE 6339

MAAMASLGALALLLLSSLSRCSAEACLEPQITPSYYTTSDAVISTETVFIVEISLTCKNRVQNMALYADVGGKQF PVTRGQDVGRYQVSWSLDHKSAHAGTYEVRFFDEESYSLLRKAQRNNEDISIIPPLFTVSVDHRGTWNGPWVSTE VLAAAIGLVIYYLAFSAKSHIQA

GGGCGGGGGTCCCCCCCCCAACATGGCGGCAGCGGTGCTCTAGGCGCCGGAAGGGGGCGTGAATCGGTG CGACCGCGCGCGCGCAGTACCGGGTCCGCGCCTGTCCCCGAAACTTCGCACCCCGTCGAACTCTCGCGAGAGC GCCGCGAAGGCGGTGCTCGGGCCAGCCCTTCTCTGCCGTCCCTGGGAGGTTCTAGGCGCCCACGAGGTCCCCTCG GGGGATGGCATCGGGCCAGAGCTCATGCTGCATGTCAAGTCCGTCTTCAGGCACGCATGTGTACCAGTGGACTTT GAAGAGGTGCACGTGAGTTCCAATGCTGATGAAGAGGACATTCGCAATGCCATCATGGCCATCCGCCGGAACCGC GTGGCCCTGAAGGGCAACATCGAAACCAACCATAACCTGCCACCGTCGCACAAATCTCGAAACAACATCCTTCGC ACCAGCCTGGACCTCTATGCCAACGTCATCCACTGTAAGAGCCTTCCAGGCGTGGTGACCCGGCACAAGGACATA GACATCCTCATTGTCCGGGAGAACACAGAGGGCGAGTACAGCAGCCTGGAGCATGAGAGTGTGGCGGGAGTGGTG GAGAGCCTGAAGATCATCACCAAGGCCAAGTCCCTGCGCATTGCCGAGTATGCCTTCAAGCTGGCGCAGGAGAGC GGGCGCAAGAAAGTGACGGCCGTGCACAAGGCCAACATCATGAAACTGGGCGATGGGCTTTTCCTCCAGTGCTGC AGGGAGGTGGCAGCCCGCTACCCTCAGATCACCTTCGAGAACATGATTGTGGATAACACCACCATGCAGCTGGTG TCCCGGCCCCAGCAGTTTGATGTCATGGTGATGCCCAATCTCTATGGCAACATCGTCAACAATGTCTGCGCGGGA $\tt CTGGTCGGGGGCCCAGGCCTTGTGGCTGGGGCCAACTATGGCCATGTGTACGCGGTGTTTGAAACAGCTACGAGG$ AACACCGGCAAGAGTATCGCCAATAAGAACATCGCCAACCCCACGGCCACCCTGCTGGCCAGCTGCATGATGCTG GACCACCTCAAGCTGCACCTCCTATGCCACCTCCATCCGTAAGGCTGTCCTGGCATCCATGGACAATGAGAATATG CACACTCCGGACATCGGGGGCCAGGGCACAACATCTGAAGCCATCCAGGACGTCATCCGCCACATCCGCGTCATC $\texttt{AACGGCCGGGCCGTGGAGGCC} \underline{\textbf{TAG}} \texttt{GCTGGCCCTAGGACCTTCTTGGTTTGCTCCTTGGATTCCCCTTCCCACTCC}$ AAAAAA

MALKVATVAGSAAKAVLGPALLCRPWEVLGAHEVPSRNIFSEQTIPPSAKYGGRHTVTMIPGDGIGPELMLHVKS VFRHACVPVDFEEVHVSSNADEEDIRNAIMAIRRNRVALKGNIETNHNLPPSHKSRNNILRTSLDLYANVIHCKS LPGVVTRHKDIDILIVRENTEGEYSSLEHESVAGVVESLKIITKAKSLRIAEYAFKLAQESGRKKVTAVHKANIM KLGDGLFLQCCREVAARYPQITFENMIVDNTTMQLVSRPQQFDVMVMPNLYGNIVNNVCAGLVGGPGLVAGANYG HVYAVFETATRNTGKSIANKNIANPTATLLASCMMLDHLKLHSYATSIRKAVLASMDNENMHTPDIGGQGTTSEA IQDVIRHIRVINGRAVEA

6866/6881 FIGURE 6342A

GACGCCCCTCTGCCCGAGACCTCTCAAGGCCCTGACCTCAGGGGCCAGGGCACTGACAGGACAGGAGAGCCAAG TTCCTCCACTTGGGCTGCCCGAAGAGGCCGCGACCCTGGAGGGCCCTGAGCCCACCGCACCAGGGGCCCCAGCAC CACCCGGGGGCCTAAAGCGACAGTCTCAGGGGCCATCGCAAGGTTTCCAGTTGCCTAGACAACAGGCCCAGGGT CAGAGCAACAATCCTTCCAGCCACCTGCCTCAACTGCTGCCCCAGGCACCAGCCCCAGTCCCTACGCGGCAGCCA TGGCCCTCGCGGCCTATGGAGCCCACAAAGTCTACCCCTTGGTGCGCCAGTGCCTGGCCCGGCCAGGGGTCTTC AGGCGCCGGCGGGAGCCCACGCAGGAGGCCTCCGGGGTCGCGGCCCAAAGCTGGCATGAACCGGGTATTCC TGCAGCGGCTCCTGTGGCTCCTGCGGCTGCTGTTCCCCCGGGTCCTGTGCCGGGAGACGGGGCTGCTGGCCCTGC ACTCGGCCGCCTTGGTGAGCCGCACCTTCCTGTCGGTGTATGTGGCCCGCCTGGACGGAAGGCTGGCCCGCTGCA TCGTCCGCAAGGACCCGCGGGCTTTTGGCTGGCAGCTGCTGCAGTGGCTCCTCATCGCCCTCCTGCTACCTTCG TCAACAGTGCCATCCGTTACCTGGAGGGCCAACTGGCCCTGTCGTTCCGCAGCCGTCTGGTGGCCCACGCCTACC GCCTCTACTTCTCCCAGCAGACCTACTACCGGGTCAGCAACATGGACGGCGGCTTCGCAACCCTGACCAGTCTC TGACGGAGGACGTGGTGGCCTTTGCGGCCTCTGTGGCCCACCTCTACTCCAACCTGACCAAGCCACTCCTGGACG TGGCTGTGACTTCCTACACCCTGCTTCGGGCGGCCCGCTCCCGTGGAGCCGGCACAGCCTGGCCCTCGGCCATCG AGGCGCGGCAGGGGGGGCTGCGCTACATGCACTCGCGTGTGGTGGCCAACTCGGAGGAGATCGCCTTCTATG GGGGCCATGAGGTGGAGCTGGCCCTGCTACAGCGCTCCTACCAGGACCTGGCCTCGCAGATCAACCTCATCCTTC TGGAACGCCTGTGGTATGTTATGCTGGAGCAGTTCCTCATGAAGTATGTGTGGAGCGCCTCGGGCCTGCTCATGG TGGCTGTCCCCATCATCACTGCCACTGGCTACTCAGAGTCAGATGCAGAGGCCGTGAAGAAGGCAGCCTTGGAAA AGAAGGAGGAGGAGCTGGTGAGCGAGCGCACAGAAGCCTTCACTATTGCCCGCAACCTCCTGACAGCGGCTGCAG TGTTCCAGGTATTTGAAGATGTTCAGCGCTGTCACTTCAAGAGGGCCCAGGGAGCTAGAGGACGCTCAGGCGGGGT AGGGGATCATCTGCGAGAACATCCCCATCGTCACGCCCTCAGGAGAGGTGGTGGTGGCCAGCCTCAACATCAGGG TGGAGGAGGCATGCATCTGCTCATCACAGGCCCCAATGGCTGCGGCAAGAGCTCCCTGTTCCGGATCCTGGGTG GGCTCTGGCCCACGTACGGTGTGTTCTACAAGCCCCCACCCCAGCGCATGTTCTACATCCCGCAGAGGCCCT CTATGTGTGACTGGAAGGACGTCCTGTCGGGTGGCGAGAAGCAGAATCGGCATGGCCCGCATGTTCTACCACA GGCCCAAGTACGCCCTCCTGGATGAATGCACCAGCGCCGTGAGCATCGACGTGGAAGGCAAGATCTTCCAGGCGG AGTTCGATGGGGAGGCGGCTGGAAGTTCGAGAAGCTGGACTCAGCTGCCCGCCTGAGCCTGACGGAGGAGAAGC AGCGGCTGGAGCAGCTGGCGGCATTCCCAAGATGCAGCGGCGCCTCCAGGAGCTCTGCCAGATCCTGGGCG AGGCCGTGGCCCCAGCGCATGTGCCGGCACCTAGCCCGCAAGGCCCTGGTGGCCTCCAGGGTGCCTCCACC**TGA**C CACCCCCCCCTGCATGCCTGGCCCCTCCTAGAAAACCCTTCCCGCCCTCGGGAAAGTAGATGTGGAGGGTG GCGCCCTGCGTAACCCTCGCCCTGTCCCTCCCACTCCCTGGGGGCCCTGTTCCACAGTGACTGGGCCCTGTCCAG ATGATTCCCTCCTCGTCAGTCTCTCAAAGACCCCATGGTCCATCCCCTGAGGGTGGTCAGCCAAGGCTCCCGTTC CGTGGGATGCCATAAAAGCCGCCCAGTGGGACCCACAGTCACACAGAGCGCCTCACCTGCATCCTCTCCCCCACA CCCCTCGGCCCCTCACCACCTCTTTCTACAGCCTAATTTATTGGATTCCCTATTCGTAGCCATCTCCGTGGCCAA TGTGACTACCGTGCCAGCGGGGGGGGGCCCAGCCTCTGAGTCCCGTGGGGCCCCGGCTCCCACCGGTGCCAAA GCCAGGAGTGCGGACACCATGTTCCCAGCTCAGTGCCAAAGAGGGGTCACCAGGGGGAGCTGTCTGCGGAGCCAG CGCCTGCCCGAGAGAGACCCCACCGCCACCGTGTGCCTTTCCCGGGCCCTCAGCCCTCGGGCCGGGCACCACCCC

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6867/6881 FIGURE 6342B

CAGTCCCCCCAGTAAA

MPVLSRPRPWRGNTLKRTAVLLALAAYGAHKVYPLVRQCLAPARGLQAPAGEPTQEASGVAAAKAGMNRVFLQRL
LWLLRLLFPRVLCRETGLLALHSAALVSRTFLSVYVARLDGRLARCIVRKDPRAFGWQLLQWLLIALPATFVNSA
IRYLEGQLALSFRSRLVAHAYRLYFSQQTYYRVSNMDGRLRNPDQSLTEDVVAFAASVAHLYSNLTKPLLDVAVT
SYTLLRAARSRGAGTAWPSAIAGLVVFLTANVLRAFSPKFGELVAEEARRKGELRYMHSRVVANSEEIAFYGGHE
VELALLQRSYQDLASQINLILLERLWYVMLEQFLMKYVWSASGLLMVAVPIITATGYSESDAEAVKKAALEKKEE
ELVSERTEAFTIARNLLTAAADAIERIMSSYKEVTELAGYTARVHEMFQVFEDVQRCHFKRPRELEDAQAGSGTI
GRSGVRVEGPLKIRGQVVDVEQGIICENIPIVTPSGEVVVASLNIRVEEGMHLLITGPNGCGKSSLFRILGGLWP
TYGGVLYKPPPQRMFYIPQRPYMSVGSLRDQVIYPDSVEDMQRKGYSEQDLEAILDVVHLHHILQREGGWEAMCD
WKDVLSGGEKQRIGMARMFYHRPKYALLDECTSAVSIDVEGKIFQAAKDAGIALLSITHRPSLWKYHTHLLQFDG
EGGWKFEKLDSAARLSLTEEKQRLEQQLAGIPKMQRRLQELCQILGEAVAPAHVPAPSPQGPGGLQGAST

TTTCCGGCCGCGGTATGAGGGGCGGGGCCGGGGCTGCTGTGGGAGAGTTCGGTTGCTGCGGGGGGCCTGCACGT TGACTGTGGGAAACTCGGAAACAAGCTCACATCTTCCTGTGGGAAACCTTCTAGCAACAGG<u>ATG</u>AGTCTGCAGTG GACTGCAGTTGCCACCTTCCTCTATGCGGAGGTCTTTGTTGTTGTTCTCTCTGCATTCCCTTCATTTCTCCTAA AAGATGGCAGAAGATTTTCAAGTCCCGGCTGGTGGAGTTGTTAGTGTCCTATGGCAACACCTTCTTTGTGGTTCT CATTGTCATCCTTGTGCTGTTGGTCATCGATGCCGTGCGCGAAATTCGGAAGTATGATGATGTGACGGAAAAGGT GAACCTCCAGAACAATCCCGGGGCCATGGAGCACTTCCACATGAAGCTTTTCCGTGCCCAGAGGAATCTCTACAT TGCTGGCTTTTCCTTGCTGCTGTCCTTCCTGCTTAGACGCCTGGTGACTCTCATTTCGCAGCAGGCCACGCTGCT GGCCTCCAATGAAGCCTTTAAAAAGCAGGCGGAGAGTGCTAGTGAGGCGGCCAAGAAGTACATGGAGGAGAATGA CCAGCTCAAGAAGGGAGCTGCTGTTGACGGAGGCAAGTTGGATGTCGGGAATGCTGAGGTGAAGTTGGAGGAAGA GAACAGGAGCCTGAAGGCTGACCTGCAGAAGCTAAAGGACGAGCTGGCCAGCACTAAGCAAAAACTAGAGAAAAGC TGAAAACCAGGTTCTGGCCATGCGGAAGCAGTCTGAGGGCCTCACCAAGGAGTACGACCGCTTGCTGGAGGAGCA CAGCTGGCTTCCACCTGGCACGTGCTGCTGCTTCCTGAGAGCCCGGCCTCTCCCAGTACTTCTGTTTGTGC CCTTCTGCTTCCCCCATTCCCTTCCACAGCTCATAGCTCGTCATCTCGGCCCTTGTCCACACTCTCCAAGCACAT TACAGGGGACCTGATTGCTACACGTTCAGAATGCGTTTGCTGTCATCCTGCTTGGCCTGGCCAGGCCTGGCACAG TGGAGTTTCTCTTGAGGGCAATAAAAGTTTTCATGGTGG

MSLQWTAVATFLYAEVFVVLLLCIPFISPKRWQKIFKSRLVELLVSYGNTFFVVLIVILVLLVIDAVREIRKYDD VTEKVNLQNNPGAMEHFHMKLFRAQRNLYIAGFSLLLSFLLRRLVTLISQQATLLASNEAFKKQAESASEAAKKY MEENDQLKKGAAVDGGKLDVGNAEVKLEEENRSLKADLQKLKDELASTKQKLEKAENQVLAMRKQSEGLTKEYDR LLEEHAKLQAAVDGPMDKKEE

MEAGVKLGMRSIPIATACTIYHKFFCETNLDAYDPYLIAMSSIYLAGKVEEQHLRTRDIINVSNRYFNPSGEPLE LDSRFWELRDSIVQCELLMLRVLRFQVSFQHPHKYLLHYLVSLQNWLNRHSWQRTPVAVTAWALLRDSYHGALCL RFQAQHIAVAVLYLALQVYGVEVPAEVEAEKPWWQVFNDDLTKPIIDNIVSDLIQIYTMDTEIP

TCTCTCCACAAACTGCCCAGGAGTGAGTAGCTGCTTTCGGTCCGCCGGACACCCGGACAGATAGACGTGCGGAC GGCCCACCACCCCAGCCGCCAACTAGTCAGCCTGCGCCTGGCGCCTCCCCTCTCCAGGTCCATCCGCCATGTGG $\verb|CCCCTGTGGCGCCTCGTGTCTCTGCTGGCCCTGAGCCAGGCCCTGCCCTTTGAGCAGAGGGCTTCTGGGACTTC|\\$ ACCCTGGACGATGGGCCATTCATGATGAACGATGAGGAAGCTTCGGGCGCTGACACCTCGGGCGTCCTGGACCCG GACTCTGTCACACCCACCTACAGCGCCATGTGTCCTTTCGGCTGCCACCTGCCGCGGGGGGTTCAGTGCTCC GACCTGGGTCTGAAGTCTGTGCCCAAAGAGATCTCCCCTGACACCACGCTGCTGGACCTGCAGAACAACGACATC TCCGAGCTCCGCAAGGATGACTTCAAGGGTCTCCAGCACCTCTACGCCCTCGTCCTGGTGAACAACAAGATCTCC AAGATCCATGAGAAGGCCTTCAGCCCACTGCGGAAGCTGCAGAAGCTCTACATCTCCAAGAACCACCTGGTGGAG ATCCCGCCCAACCTACCCAGCTCCCTGGTGGAGCTCCGCATCCACGACAACCGCATCCGCAAGGTGCCCAAGGGA GTGTTCAGTGGGCTCCGGAACATGAACTGCATCGAGATGGGCGGGAACCCACTGGAGAACAGTGGCTTTGAACCT GGAGCCTTCGATGGCCTGAAGCTCAACTACCTGCGCATCTCAGAGGCCCAAGCTGACTGGCATCCCCAAAGACCTC CCTGAGACCCTGAATGAACTCCACCTAGACCACAAAATCCAGGCCATCGAACTGGAGGACCTGCTTCGCTAC TCCAAGCTGTACAGGCTGGGCCTAGGCCACAACCAGATCAGGATGATCGAGAACGGGAGCCTGAGCTTCCTGCCC ACCCTCCGGGAGCTCCACTTGGACAACAACTTGGCCAGGGTGCCCTCAGGGCTCCCAGACCTCAAGCTCCTC CAGGTGGTCTATCTGCACTCCAACAACATCACCAAAGTGGGTGTCAACGACTTCTGTCCCATGGGCTTCGGGGTG AAGCGGGCCTACTACAACGGCATCAGCCTCTTCAACAACCCCGTGCCCTACTGGGAGGTGCAGCCGGCCACTTTC CGCTGCGTCACTGACCGCCTGGCCATCCAGTTTGGCAACTACAAAAAGTAGAGGCAGCTGCAGCCACCGCGGGGC CTCAGTGGGGGTCTCTGGGGAACACAGCCAGACATCCTGATGGGGAGGCAGAGCCAGGAAGCTAAGCCAGGGCCC AGCTGCGTCCAACCCAGCCCCCACCTCGGGTCCCTGACCCCAGCTCGATGCCCCATCACCGCCTCTCCCTGGCT CTCCACAGCCACCCAGAGGCACCCCATGAAGCTTTTTTCTCGTTCACTCCCAAACCCAAGTGTCCAAGTCTCCAG TCCTAGGAGAACAGTCCCTGGGTCAGCAGCCAGGAGGCGGTCCATAAGAATGGGGACAGTGGGCTCTGCCAGGGC TGCCGCACCTGTCCAGACACACGTTCTGTTCCTCCTCCTCATGCATTTCCAGCCTTTCAACCCTCCCGACTC CTGTTCCCTCCATCTCTCCGAACCTGGCTTCGCCTGTCCCTTTCACTCCACACCCTCTGGCCTTCTGCCTTGAGC TGGGACTGCTTTCTGTCTGTCCGGCCTGCACCCAGCCCCTGCCCACAAAACCCCAGGGACAGCGGTCTCCCCAGC $\verb|CTGCCTGCTCAGGCCTTGCCCCCAAACCTGTACTGTCCCGGAGGAGGTTGGGAGGTGGAGGCCCAGCATCCCGC|$ GCAGATGACACCATCAACCGCCAGAGTCCCAGACACCGGTTTTCCTAGAAGCCCCTCACCCCCACTGGCCCACTG GTGGCTAGGTCTCCCCTTATCCTTCTGGTCCAGCGCAAGGAGGGGCTGCTTCTGAGGTCGGTGGCTGTCTTTCCA TTAAAGAAACACCGTGCAACGTG

TTTAGGGAGAAGAAGCAACCCTTAAAATAGAGGAAAATGAAGCTGCTTGGATTACCCTGTTGAAGTTCATCTCT
GCCTGTGCCATGCATGAAAAAAATACTGGCAAAGTCTTCACTTACATGAGTGTTAGACTCCATGTTCCCAGTGGGT
CTCGGGGTTCAGAACTGAGTGCTCTCATCCAAGCAATAGGAGCGTCGACCTCAGGAAAGCCCAAGTGTTTTGTGT
GTATTTTGAGGAGTGGGTTATCTGTTGCACTGAGCCTCTCTGTGTATTTTCTTCTTCTTTTCAGCAGAACAAGGG
GAGGTGGACATGGAGAGCCACCGGAATGCCAACGCAGAGCCAGCTGTTCAGCGTACTCTTTTAGAGAAATAGAAG
ATTGTCGGCAGAAACAGCCCAGGCGTTGGCAGCAGCAGGGTTAGAACAGCTGCCTGAGGCTCCTCCCTGAAGGACACC
TGCCTGAGAGCAGAGATGGAGGCCTTCTGTTCAC

CTAGTTTCTCAGGATCATGTCTGTGAGCCAGGATTCCTGATCCAGAGACAATGGCCCCGATGGGATGGAGCCCGA ATGCGTCATTGAGAGTAACTGGAATGAGATTGTTGACAGCTTTGATGACATGAACCTCTCGGAGTCCCTTCTCCG TAATGTAATCGCTCAAGCCCGATCTGGGACTGGGAAAATGGCCACATTTGCCATATCGATTCTGCAGCAGATTGA ATTAGATCTAAAAGCCACCCAGGCCTTGGTCCTAGCACCCACTCGAGAATTGGCTCAGCAGATACAGAAGGTGGT CATGGCACTAGTAGACTACATGGGTGCCTCCTGTCATGCCTGTGTCAGGGGGCACCAATATGCGTGCTGAGGTGCA GAAACTGCAGATGGAAGCTCCCCACATCATCGTGGGTACCCCTAGCCGTGTGTTTGATATGCTTAACCAGAGATA CCTGTCTCCCAAATACATCAAGATGTTTGTACTGGATAAAGCTGATGAAATGTTAAGCCGTGGATTCAAGGACCA GATCTATGACATATTCCAAAAGCTCAACAGCAACACCCAGGTAGTTTTGCTGTCAGCTACAATGCCTTCTGATAT CATCCGCCAATTCTACATCAACGTGGAACAAGAGGAGTGGAAGCTGGACACACTATGTGACTTGTATGAAACCCT AGATTTCACTGTCTCCGCCATGCATGGAGATATGGAĆCAAAAGGAGCAAGACGTGATCATGAGGGAGTTTCATTC TGGCTCTAGCAGAGTTTTGATTACAACTGACCTGCTGGCCAGAGGCATTGATGTGCAGCAGGTTTCTTTAGTCAT CAACTATGACCTTCCCACCAACAGGGAAAACTATATCCACAGAATCAGTCGAGGTGGACGGTTTGGCCGTAAAGG TGTGGCTATTAACATGGTGACAGAAGAAGACAAGAGGACTCTTCAAGACATTGAGATCTTCTACAACACCCTCCAT TGAGGAAATGCCCCCAATGTTGCTGACCTCATCTGAGGGGCTGTCCTGCCGCCCAGCCCAGCCCAGGCCCAATC ATAAATGTCACTTTTTGAGGCCAAAA

WO 2004/030615 PCT/US2003/028547

6877/6881 FIGURE 6352

ACTTCTGTTCCAAAGGCTGGGAAGAACTAAGCTGCCCCAGCTCCTCCCATTTCTTGGGCAGGGCTCTTTCCTGTT CTCTTAAGGGCCTTAGAACTCTTGCTCTTCCTGGGCTGTGGGGGAATGAGTGTTCTTGCCATTTGCCAGCCTAAT GCGCATGGTTTCTGCCCCTGATAACAGGAGTGAGTGAGCCCCTCAGACCTGCACTCTGGGTGTCTCCTGCTTTCA AAGGTTCTTAATAGTGAATGCTTTAAAATTAAAGTCATCACAAAATGGAAGTTTTCCCAGGGTGGAAAACAAGAG GAAGTGCTGCTGTAATTGGGAGCACAAGGGGCCCTCCCAAAAAGGAGCCCCACCTCAGCATCACTGCCTTATTTGT GACTTTTCCCCATCATCCCTTCCATTGCCACACCCTAGATCCAGCCTCAGGAACTAATAAGTTTTGAGAAAAGCA CCTCCTTGTCCCAAGGTTATAAGGCCTTGTCTTTCTCTTTTGGAATCATAAAGTGGAACAGAGTCCCCAGAACTCG TGTGGCCATTTCCGCCAGCATCACTCCCCGGTGCCTGTGGGGTCCCGGTGTACCTAATGGGAGAACGATCCCATG TGCTAGCCAGAATATACCGTCTCTTGAAGGAAAGCAGGAGCTCAGACTTTTAGAGCCAGCTGTGGCTTCGGACC CAAGGCCTGACCTAGGCTGCTATCCTAATATTGCAGAAGGGGCCTCTCTTCCAAGCCCCACCCTAAGGGTTAGCC CTTGGCCAAATCTTTTGCCATCTGGTCCCAGCTAGGCTTTTCTGACTAAATAAGCAATAAGAGGGTCTAAGCTGA CTGAGTTGCAAGGACCCTTTCCACCCTCCCTTGGATCTCCATGTTTTTCCAGATGGAGGAAGAGCATGTGCCACC CCCTGTCCTAACAGGCTTGTCCAAGTGCTTGGTGTGGGACCCAAGACCAAAGCCCAGGATGGCTTGGTGGGAGTG TCCCCCACAGCAATGCCATTCCCACTTGCCCCAGAGAAGCTACTCAGCCAAACCTAGCCAGGGTCTGTTCATGTA GACCAGAGCCAGCCTAGTCATTATTTGCTGTCGGGTTTCCAGTTTCACTGTGTTAGGGCGAGGGATGATTGTA AAATTTGCTCCTCAAAGGAATCAGGCCAGACTCAATTTTGGAGGGCAAGACAGGGAGGAGGCCGCTTCATCCCAG ACTCTCTTCTAGGGCTTCCCACCATCAGCCCCTCCCACTTGAGACTGGTCTTCAGGAGGCAATAGGCCACCATGC CTGGTCAGCATCAATTCAAGCCATGCCAGGAATCTGCCTACCTGCCAGGTTCAGTTCCTTTAAGGTGCCTCTTAA GGGACACACTGTGTCTCTGATTGGGCTTCTAAATCAAAAGCCTGATGTTCGTGTCCCTCTCATAGGGGGAGCT TTGGATACAGGACCAGTTTGGAAAAGGGTCAGGTAAGGGTTTCCACTCTGCACATTGTAGAGGGGACGCTCGGTA GCCCATGGGTCCCTTACTAAAGAGGTTGAGTGAATTTGCCTTCAGTTAACCTGGGACCTTCTGTTTAGCTTCCTT CTGCTTCCCAAAGATTTTAAGCATTTTGTAAATGTATAAACTCACCTCTGGCAACAGTGGCCCAGATGCTGCTTT GTGCTATGTAAAGGCAGTCTTTCCCTGGGAAATGGATGCTATTCTATTCTGCTGCCCCTACCTGTTCCTGAGGCT TCATTTAGAAAGAAATACCCTCAGAAGGCTGTCTGGCACCCAGTGTCCTAGCCAGGCCAAATATATGAGAAAGG TAAGTCCATTTTCCCCTTCAGGTCCTCAGTGGATGACTTAACCACTGCTGTCCCTTGGTCCCTTTTTCCTAAACA GGGGTTTAGTTCTGTCTTTTTATCCTTTTTTCTAAATGCTGGTAAATATCTACATTCAGCCAGGAAGAGAGGGCC AGAGGTCGGGCCAGCTGCCCCATTCTTTTAACGTTGTAGGGCCTGCCCCTGGAGTGGACCTTCCTCTTTGGGCCT CGTCAGCTTTTTTGCTTATCATATTCCATTTTGTGCCACTTTCCCCCTTCAAGATGCCATTTGGAGGGTAGGGGA TCTGCTTTCCACTGTGAGTGGGCTATGAGATTCTGACTACCTTGCTTACAGATTCATGGTTTGATAAATTTGTTG AATTAATAAAAGTGGGTTTAAAAAACCT

6880/6881 FIGURE 6355A

CACAACCGTGACAGACTGCCATTCCTGAGTCTCTTCTGGCCATGGGCCCCCGGAGCCGTGAGCGTCGGGCAGGCG TTGCCGCGTTGCTGGTTCCGGGCGCGCGCGCGCGCACCGCTCATTCACCGAGGCTACTACGTCCGCGCACGCG $\tt CCGTGAGGCACTGCGTGCGCGCTTTTTTGGAGCAGATTGGCGCGCCCCAGGCCGCGCTTCGCGCGCAGATCTTGT$ CTCTCGGCGCTGGCTTCGACTCGCTCTATTTTCGCTTAAAAACCGCGGGCCGCCTGGCCCGGGCTGCAGTCTGGG AGGTGGATTTTCCGGACGTGGCGCGCGCAAAGCAGAAAGGATTGGAGAGACGCCAGAGCTGTGCGCGTTAACCG GGCCTTTCGAGAGGGGGGAGCCCGCGTCCGCGCTGTGCTTTGAGAGCGCAGACTACTGCATCCTGGGTCTGGACT TGCGGCAGCTCCAGCGAGTGGAGGAGGCCCTGGGCGCGCGGGGCTCGACGCAGCCTCACCCACTCTGCTCCTGG CCGAGGCGGTGCTGACCTACCTCGAGCCGGAGAGTGCCGCGGCCCTCATCGCCTGGGCAGCCCAGCGTTTTCCTA ATGCCCTTTTCGTGGTCTATGAGCAGATGAGGCCTCAAGACGCCTTTGGCCAGTTCATGCTGCAACATTTTCGGC GCTGGACCGCCTGCGGTGCCGTGGACATGAATGAATTCTATCACTGCTTTCTTCCCGCAGAAGAACGCCGGCGG TGGAAAATATTGAACCCTTTGACGAATTTGAGGAGTGGCATCTGAAGTGCGCCCATTATTTCATTCTGGCAGCTT CTAGGGGAGACACCCTCCCCACACCCTAGTGTTTCCATCCTCAGAGGCATTTCCTCGCGTAAATCCTGCTTCGC CTTCAGGGGTATTCCCTGCCAGCGTAGTCAGTAGCGAGGGCCAGGTCCCAAACCTGAAGAGATATGGCCACGCCT CTGTCTTCTTGAGCCCAGACGTTATTCTCAGTGCAGGAGGAGTTTGGAGAGCAGGAGGGGGGCACTGCCGAGTGA GCCAGTTTCACTTGCTCTCAAGAGATTGTGACTCTGAATGGAAAGGCAGCCAAATAGGCAGTTGTGGGACTGGAG TGTCCCCAGTAAGTCCAGCCTTGGGGGTTCTCCAGCTTCATTTTTTTAAGAGTGAGGATAATAACACTGAGGACC TGAAAGTGACAATAACAAAGGCTGGCCGAAAGGATGATTCCACTTTGTGTTGTTGGCGGCATTCAACAACAGAAG TGTCCTGTCAGAATCAGGAATATTTGTTTGTGTATGGGGGTCGAAGCGTGGTGGAACCTGTACTAAGTGACTGGC ACAGTGCCTGCACTTGGCAAGGGGGAGCCCTTATTGCTGGAGGTCTCGGGGGCTTCTGAGGAGCCATTGAACTCTG TGCTCTTTCTGAGACCAATCTCTTGTGGATTCCTCTGGGAGTCAGTAGACATCCAGCCTCCCATTACCCCAAGGT CTGGAGTGACTGTGATCAATTTGACTACAGGATTGAGCTCTGAGTATCAGATTGACACAACATATGTGCCATGGC CATTAATGTTACACAACCATACTAGTATCCTTCTTCCTGAAGAGCAACAGCTCCTGCTCCTTGGAGGTGGTGGGA ACTGCTTTTCCTTTGGTACCTACTTCAACCCCCATACAGTCACATTAGACCTTTCTTCCTTAAGTGCTGGGCAGT AAGGACTGGACTAATATTCAGGACCCACTAAAGTAGACAATAAAGTTTTCCACAAATAGGATGACCCTCTAGCTA TAGATACTGCCACTCCTTTCCCCATCCTTTTTTTCCCTTAGCACTATTCAGTGCAAAAAGTGAAAAAGGTTG GTAAAATAGGTAAAATACCTAGAAACAATCACTACAGAAAACAGCTGAAGACAGTGGCCATGCAGTCCGAGAGGA GTAGTGGTCTGCCTCTAATTTTCTAATCTAAGTTCGTTTATTGAGTTACAGTGGTCTTTAGTAAAAGTAAAACAAT TTCCCAATCCCAGGCCTTGTGATTTGAGATGGTACCTTAGAAAAAGTTACACGCAGTTCCGTGGTTGAATATATT TGAGATGGTACCTTAGAAAAAGTTTCACGCAGATCCTTGGTTGAATATAGTTGAGGGAGCGTAGTATTGACAATT TCGGATAGTTTTAACAACAGGAAACACTTGTAGGACTTCCTTTACCAACATACTTTTTAAATGTTTTGCTATTGG TTCCATATTTATTTAGATTTATAAGTGTCAATAAAGCAAACTTTTGATGCCTCAATTCATTTTGCACGGGGTATA ATAATGTTTTGTTCCAGATATACTCTCCACCTTTCACTGTTCTGTGCTCCAAGAGGCTGACCTTTATGGGCTGCA TCAAGGAGCTCTCTTTACTTTTGGTTGAGTTCCACCAGTCAGAGGCACCAGAGGGGAATGGGGGCAAAAAGAAG AGTGAGAGTGAGTTGGTATTTATTCCCAATTCTTCCCCTGTTGGTTTGCAAGTTGGCAGTGGCAGCATTCTTCTG TCAAAGGCTACAGCTCCTGCCGTGTAATCCTTTCCTGAAGACAGAGTTCTAATTCTGCATCATCCCAGGTTTCAG TAATTGTTCCTTTACTTCACCTTTTCAGGCCTAGGAGTTGTGATGGCTCTTTGCTAGACCTGAACTGTACTGTCC AATGTGGTAGCTATTGACAACATGTGACTATTTAAACGAATTAATAAATTCAGTGGCTTAGTCACATTGACCACA TTTTAAGTGCTTAATAACTATGTGTGGCTTTGGCTACTGTATTAGACAATGTAGATGTAGAACATTTCATCGTTA CAGAAATTTCTACTGGACACTGCTGACTGGATATCTTGACTTGGTTTCCCTTAACCCTACTCAGCCCCTTATAGT TAGCATCCCATTAAACTCAATTATCCCTTTTATATGGGAATCTGTTGCCTAGTGAGCCATGTGAGATCAATGAAA TAGCTATTCATCCTTAAAATTTGAGCCTTAATTTGTCATCTAAATTATGCATACCTTGTGAAATATACACCTCAA AAAATGTAGTGGCTTTGGTGGTAATAAGTGTATTACTTTAGTATTTCTTCTTAGTCCTAGAAACCTTAGTAGTTT

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